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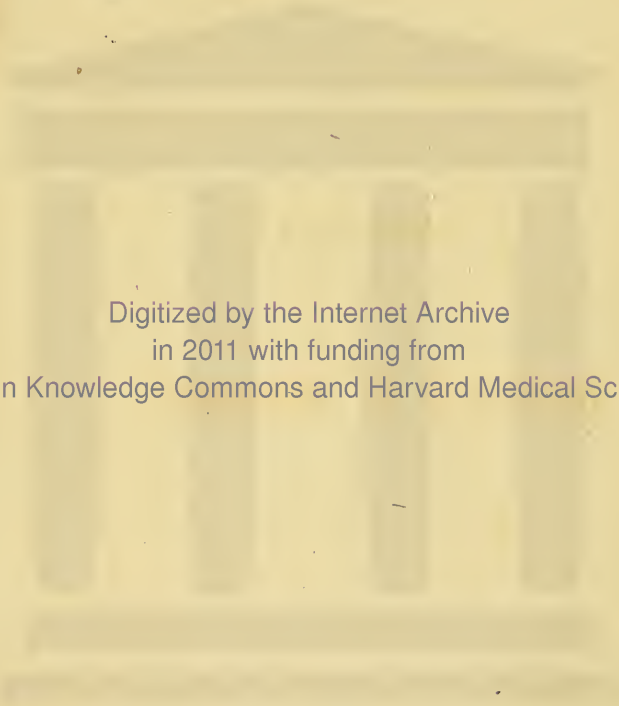

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A NARRATIVE

OF A

Journey to London.

BARNARD AND FARLEY,
Skinner-Street, London.

A NARRATIVE

OF A

JOURNEY TO LONDON,

IN

1814;

OR, A PARALLEL

OF THE

ENGLISH AND FRENCH SURGERY;

PRECEDED BY SOME

OBSERVATIONS

ON THE

LONDON HOSPITALS.

BY

PHILIBERT JOSEPH ROUX,

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NARRATIVE

OF A

JOURNEY TO LONDON,

1814, &c. &c.

PRELIMINARY OBSERVATIONS.

A FEW Surgeons of celebrity have flourished, at distant intervals, in Italy, in Germany, and Holland. It is not long ago that Camper filled all Holland with his renown; Germany too, a short time since, boasted of Richter, Siebold, and Bruninghausen. At this very moment Italy proudly opposes to us Scarpa. But it is a truth, that the French and English surgery have been, since the revival of the art, and are at this moment, the only rivals. Wiseman, both as to the period when he flourished, and the services he rendered to surgery, was the Paré of England: and from this æra, so remarkable in the history of our art, the two ntaions have never ceased mutually to oppose

to each other, men eminent in this department. It would be difficult to determine, whether the French or the English have had the greatest share in the immense improvements which the art has received in the course of the last century, and to the smaller number which the first years of the present have contributed.

How many diseases have been observed for the first time by one or the other! And still how many more new operations, or new operative proceedings, of which the French and English surgery dispute between them the invention! To give only a few examples, there is the circular amputation of limbs by the double incision, the first idea of which, the English attribute to Cheselden, and which we claim in favour of J. L. Petit; there is the method of operating for external aneurism, by making the ligature of the diseased artery above the tumor, the fortunate idea of which occurred at the same time to Desault and John Hunter, or rather, they rescued it from the oblivion into which it had fallen; there is the operation by incision for the fistula in ano, which, if not invented, has, at least, been brought to the greatest degree of simplicity, and highest state of perfection, by Pott, Desault, &c. &c.

On the other hand, the French surgery may, without doubt, boast of a multitude of discoveries which belong exclusively to it; the nature of the cataract better ascertained, as well as of all the

varieties of this affection; the method of extracting the crystalline lens, absolutely created by Draviel; that of treating the *fistula lachrymalis*, by dilating the nasal canal, and the most successful method for effecting it's execution; the first descriptions of hernia of the brain, of the lungs, and of several kinds of abdominal herniæ, so numerous and so different among themselves, both as to their respective seats, and to the different parts which constitute them; the treatment of strangulated hernia, of hernia in a state of gangrene, so well illustrated by Goursand, Pipelet, Louis, &c.; the idea, certainly more ingenious than profitable to the art, of the lateral operation for the stone properly so called, that is to say, of the operation performed in the perinœum, in such a manner as to penetrate into the bladder on one side of it's fundus, without encountering it's neck, such, indeed, as it was conceived by Le Dran, and extolled, for a time, by Foubert and Thomas; the operation of Frere Jacques; the hypogastric lithotomy imagined by Franco, and brought to the highest degree of perfection by Frere Come; the different methods of puncturing the bladder; the amputation of limbs at the articulations, and more particularly the extirpation of the arm, which Ledran the father, or perhaps Morand, first carried into execution, and which received a more regular character from Lafaye; and another operation still more ingenious,

because Chopart was not led to it by necessity, which increases industry, I mean the partial amputation of the foot at the double articulation of the astragalus and os calcis, with the scaphoid and cuboid bones. These discoveries and inventions, which are but the principal ones amongst all those that could be cited, are indisputably our own, and will be an eternal honour to French surgery. But the English have likewise to boast of having enlarged the boundaries of the art in a great number of instances.

The perforation of the os unguis in order to establish an artificial passage for the tears, in cases of complete obstruction of the nasal canal, is the discovery of Woolhouse.

Cheselden created the operation of the artificial pupil, and at the same time was the first who conceived and realized the project of combating a blindness existing from the birth, whether depending on cataract, or on imperforation of the pupil.

It is to Cheselden, likewise, that we are indebted for the method of perforating the stenonian duct at a greater or less distance from it's natural orifices and on the inside of the mouth, in certain cases of salivary fistula of this duct, which resist every other treatment.

The name of *maladie de Pott*, which we ourselves have given to that affection of the vertebral column, so frequent, in which there is always joined,

to a deformity of the spine, and a peculiar alteration of one or more of the osseous portions which compose the vertebral column, a weakness more or less considerable, or an almost complete paralysis of the inferior extremities; this name, I say, sufficiently points out, that it is to Pott we owe the first description of this disease. Nothing can be more exact than that which he has given, scarcely has any thing been since added to it; and experience has only confirmed the treatment which Pott first conceived.

The first observations on congenital inguinal hernia are by Arnaud and Haller; but Pott and W. Hunter, by uniting together fresh facts on this species of hernia, have connected the description of it with the general history of herniæ.

The employment of caustic in the treatment of hydrocele, and the still more simple and efficacious method of injection, belong to English surgery.

What can be more important than the numerous experiments of Cheselden, in order to be able to discover the best method of practising the lateral operation of lithotomy. Cheselden obtained more than he hoped for: he succeeded better than Raw, whom he sought to imitate; at least, there is reason for thinking so. The lithotomy of Cheselden, or the lithotomy of Frere Jacques, brought to perfection, superseded the high operation: it is that which we still practise; and for almost a century, opera-

tors have only exercised themselves in contriving new instruments to cut their way through those parts which Cheselden divided with a simple bistoury, properly directed upon the groved sound.

W. Hunter, though he was acquainted with the first facts collected in Italy by Guattani, with respect to varicose aneurism, still has not less enriched the science by new observations on this singular disease: he ascertained their nature more correctly than Guattani had been able to do; and what he has said of the palliative treatment which ought to be opposed to them, has been consecrated by the general consent of practitioners.

In the same manner, it was known antecedently to the observations of the English surgeons, that extraneous bodies, soft, cartilaginous, or even osseous, sometimes formed spontaneously in those articulations, the surfaces of which are moistened by synovia. Morgagni speaks of them, and long before him our Paré relates an instance of it. But Middleton, Simpson, &c. have collected facts on this kind of affection; they have dealt out the most reasonable conjectures on the manner of production of these extraneous bodies, and on the reason of the different states in which they are found. Although Pechlin relates a case of the extraction of one of these concretions formed in the knee-joint, it is generally attributed to the English to have been the first to practise this operation, which, how-

ever, I shall take care not to put in competition with a great many others, for importance and utility; because, notwithstanding some successes obtained in England by different surgeons, and in France by Desault, this extraction of concretions of the joints, exposes the patients to serious accidents, and has been fatal to a tolerably large proportion of the persons on whom it has been practised. The symptoms produced by the presence of one of these are, in general, so trivial, they happen generally at periods so distant, and we can succeed so well in general in rendering them more tolerable, or even in completely preventing a return of them, by a permanent compression on the whole periphery of the diseased articulation, that their extraction ought only to be proposed in a very few cases. Such is the opinion of the French surgeons; such is likewise that of the English surgeons.

The amputation by a flap in the continuity of the limb, an operation which is neither so advantageous as was at first pretended, nor yet entirely to be rejected, is an invention of English surgeons. Lowdham had proposed it before Sabourin of Geneva, and Verduin of Amsterdam.

The English surgeons were the first partizans of the healing by the first intention, not only in the wounds succeeding to the amputation I have just mentioned, but likewise in those resulting from the circular operation. In extending it to a num-

ber of other cases, they have shewn themselves, and still continue to shew themselves, more careful than we are, to take every step in their power to obtain a speedy cure, both of accidental solutions of continuity, and of those resulting from a very great number of operations, and to attempt an immediate union of wounds, under all circumstances wherever this method is practicable.

Two operations, which have some affinity to one another, and the fate of which is not yet definitively determined, have been proposed by White of Manchester; that is to say, the cutting off the contiguous osseus extremities in false articulations, and the removal of the articular portions of carious bones, as a substitute for the amputation of the limb above the diseased joint. This twofold invention bears the stamp of true genius. Even should the former of these operations be superseded in every case in which they were thought applicable, by the method of Physick of Philadelphia, and the removal of the extremities of carious joints, which, from the joint of the arm, for which White first proposed and practised it, has been since extended to several other joints, should not be preferred in future to the amputation of the limbs, yet the name of White stands for ever honourably inscribed in the annals of surgery. And should the prejudices which the French, and even the English surgeons themselves, have conceived against this removal of

carious extremities of bones be dissipated, which, however, there is very little reason to hope; if new trials should be attended with a success similar to that obtained by Park of Liverpool, and our two countrymen Moreau of Bar-sur-Ornain and Mr. Champion, White, as I have once before said on a solemn occasion, and I repeat it again with pleasure, would have been the promoter of a revolution in the treatment of white swellings of the joints; the operation he has practised would signalize an important epoch in the progress of surgery.*.

No one can value more than I do the beautiful work of Scarpa on aneurisms; but the idea conceived, and carried into execution for the first time by Astley Cooper, of applying the method of Hunter to aneurisms of the carotid artery, by taking up this artery on the side next the heart below the tumor, and the ligature of the external iliac artery for aneurisms in the groin, which aneurisms, hitherto reputed incurable until this operation conceived by Abernethy, was successfully executed by Cooper; these two operations, I say, will mark out an epoch still more brilliant in the history of the progress of surgery, with respect to the treatment of aneurism. It is to the English likewise that we

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* Vide *De la resection, ou du retranchement de portions d'os malades, soit dans les articulations, soit hors des articulations.* Paris, 1812.

owe, not the project of tying up the axillary artery immediately below the clavicle, or even immediately above this bone upon the first rib, but the first instances of success in this operation, which is much more difficult in the execution than the ligature of the external iliac artery, and still more uncertain in its results.

Shall I examine which of all these services rendered to surgery, by the English on the one hand, and the French on the other, have been the most useful? Shall I decide to which of the surgeons, whether French or English, the superiority in point of importance of their discoveries is to be awarded? No. How can any one be an impartial judge in his own cause? It is of some celebrated surgeon of another nation that we must ask whether our Paré has not done more than Wiseman towards the restoration of surgery; whether Cheselden or J. L. Petit are most conspicuous in the progress of surgery at the beginning of the last century? What society of able surgeons in England can be compared to that company, of which the suppression has been so prejudicial to science, the renewal of which would be a real benefit; our ancient academy of surgery? Whether there be a monument of English surgery which can be placed on a footing with the memoirs of that illustrious society; memoirs in which so many points of doctrine have been fathomed and discussed?

It is to be asked of some celebrated surgeons of another nation, whether Pott and Hunter, or Desault, their contemporary, possessed the true surgical genius to the highest degree? and whether or no the school of Desault was more fertile than that of Pott and Hunter in surgeons of ability? Desault carried to excess, if I may be allowed the expression, the enthusiasm of surgery. His name is not attached to any important discovery in anatomy; but he created surgical anatomy. It is true, that all his discoveries have not been to the science so many steps towards perfection. Several operative proceedings, which he wished to revive, have sunk again into that oblivion from which he ought not to have taken them: he, who at first shewed himself so desirous of reducing the weapons of surgery, encumbered it afterwards with more instruments, the utility and necessity of which are not generally acknowledged. It is true that he often strained facts, in order to present them in a manner conformable to some opinion which he had pre-conceived: and, on this account, there is need, not only of great discernment, but also of that habit of judging which experience gives, in order to appreciate, as they deserve, the different practical facts collected by Desault. It is lawful, therefore, to doubt, whether compression, affected by means of plugs, successively larger and larger, has been in his hands, a method of perfect cure for schirrous tumefactions of the

rectum; neither, indeed, has experience confirmed all that he advanced concerning the advantages of a ligature in the treatment of the umbilical hernia of children: his dislike to the operation of the trepan, in certain primitive or consecutive symptoms, is somewhat exaggerated: no practitioner believes, at this day, that drinks, containing emetic tartar, are so efficacious in these same symptoms, from wounds in the head, and in the injuries of the spinal marrow, as Desault pretended, &c. &c. &c. But how many invaluable observations, useful inventions and improvements, added to almost every branch of operative surgery, cause us to forget these errors of real talent; these slight blunderings of the imagination, or of the genius.

In fine, it remains for some celebrated surgeons of another nation to inform us, which of the English or the French surgeons have most contributed, in these latter times, to the enriching the science by new facts, and extending the boundaries of the art by new inventions. I have already hinted at some of those things for which surgery is indebted to the men of whom England boasts at this moment; I shall be naturally led to make known others whom I have not yet had occasion to make mention of: but I remain silent on what relates to ourselves, and leave to others the care of collecting and comparing the labours by which we have been able, in these latter days, to add to the riches of the art. If

I undertook the task, perhaps, through national pride, I should value our discoveries at a higher rate than they really deserve: perhaps, too, I might not be able to overcome certain prejudices, and should not render to each one the justice that is due: how, indeed, do I know, whether, by a peculiar sentiment of self-love, I might not have the proud presumption to notice some things peculiar to myself, but which, without doubt, do not deserve to be considered as any eminent services rendered to surgery.

The end, however, that I proposed to myself, in giving these first considerations, has been nearly accomplished. I wished to speak less of ourselves than of our neighbours: I wished to take a rapid glance of all that surgery owes to the English, and to make known the share which they have had in the immense progress it has made since the commencement of the last century: I wished also to excite a desire of knowing what is the precise state of surgery at this moment in England, to form a comparison on the principal points at least, if not in every particular, of the practice of the English surgeons with our own, after having taken a hasty glance at the state of the London hospitals, and the teaching of medical science in that capital: to point out with frankness, and without vanity, with no other view than the interest of the art, those things in which each of the two systems is superior

to the other; in fact, to take a view of, for the purpose of appreciating their just value, the new facts collected by the English surgeons, and their different attempts to bring the art to a greater degree of perfection: such is the object of the following Narrative of the Journey I made to England last year; and which, if I am not deceived, will afford some interest: it must at least be allowed the merit of being the first work of the kind undertaken by a Frenchman.

Several French surgeons, however, who had already obtained celebrity, or who afterwards acquired it, have, at different periods of the last contury, visited England with the same intentions. When the first successes of Cheselden in the operation of lithotomy were made known in France (in 1729), Morand solicited, and obtained from the Royal Academy of Sciences, the honourable mission of visiting the London hospitals, and particularly that of St. Thomas's, where Cheselden was practising with so much renown. Thirty years since the present father of French surgery, our venerable M. Tenon, visited London, for the purpose of comparing the hospitals of that capital with our own, in regard to their organization. Not long after, Chopart set out for London, and made a stay there of several months. M. Dubois, then a very young surgeon, accompanied him. But neither of them has made known, in a particular manner, the state

of surgery in England at the period they observed it. Morand, in his *Opuscula*, speaks only of what he had witnessed relative to the operation for the stone. M. Tenon only interested himself in rendering more complete and more interesting, his beautiful work on the Hospitals of Paris. Chopart only profited for himself by what he saw in London.

I had for a long time projected the journey which I am about to relate. Had it been in my power to have undertaken it at the time I first formed the idea, being then more master of my time, I could have sacrificed more of it: perhaps I should not have confined my excursion to London only; I might possibly have visited Edinburgh and Dublin, although it is well known that it is principally in the London hospitals that a just idea can be formed of English surgery: in fact, by making a longer stay amongst the English surgeons, and varying the places of my observations, they would doubtless have been more multiplied. But at the same time, a few years ago, being less informed by experience, I should have seen every thing with eyes much less exercised; in approving or blaming, I might have committed serious errors; and in every respect my observations would have possessed less importance, and my opinion less value. Being less known likewise to the English surgeons, than when circumstances permitted me to carry my project into execution, I should very pro-

bably have been not so well received by them: it would have been natural for them to have shewn me less frankness, and to have been less eager to satisfy my curiosity.

At all events, it was not useless for the honour of French surgery, that the English surgeons should have been visited by some one of us capable of appreciating what was doing amongst them, and of inspiring them with sufficient confidence that they might be desirous of learning from him what was going on in France. Already, indeed, and in spite of the short time the communication between the two countries had been established, the prejudices of the English practitioners against the French surgery had been strengthened by the unfaithful reports of some young English medical men, probably some of the pupils who had visited Paris. When I first arrived in London, they spoke to me of the bad condition of our hospitals: our surgery was considered as much inferior to the English surgery; especially in some of the Parisian hospitals, where, although I know not what is doing, I have every reason to believe that their ordinary practice deserves commendation; they asserted on the contrary, that it was only proper to inspire disgust; and because in England the actual cautery is almost universally proscribed, while in France it is consecrated in the practice of surgery, although applied by the greatest number, and the best of surgeons,

with the most rigid economy, we were represented as making the most abusive use of it, and marching always armed with red hot irons. I endeavoured to do away these prejudices from the minds of the English surgeons, and to give them a different idea of the state of Surgery in France. To be confident that my efforts were successful, would be to presume too much on myself: I feel sensibly that our cause might have been better placed in the hands of many others, and that the French surgery might have found a more worthy representative.

What I knew of the national pride of the English, which is greater, perhaps, than that of any of the other civilized nations, and extends from the most elevated rank to the lowest class in society; what I had heard amongst us of the pretensions of their surgeons to a great superiority, made me afraid of meeting from them but a cold reception. I was received, on the contrary, in a manner the most flattering and honourable. I have not only to speak in praise of those attentions which politeness requires towards foreigners who exercise the same profession, and whose names may be more or less known, attentions of which we Frenchmen are extremely prodigal: the surgeons of London beside shewed me every species of kindness; I received from them marks of esteem, I could almost say, of deference, which I was far from expecting. They took a great pleasure in informing me of whatever

I wished to learn from them, and shewed the greatest interest in learning from me different peculiarities of our surgical practice. They carried this interest so far, as to desire that I would go through some of our operations before their eyes, and even that I should perform upon some of their patients, different operations, according to our mode of proceeding. The proposition was too honourable for me to refuse; and I cannot better return the obliging conduct of the English surgeons towards me, than by giving some details on this particular part of my visit amongst them.

We make in France a tolerably frequent use of moxa, and I think I am one of the French surgeons most in the habit of employing it. I have, moreover, established, by a multitude of observations, its good effects in white swellings of the joints. This remedy is not yet used in London; and in consequence of what I said of the advantages we derive from it, I was requested to apply it in some cases where it seemed to me applicable. At St. Bartholomew's, one of the large hospitals of London, Mr. Lawrence, a young surgeon, of whose merit I shall have occasion to speak, and to whom the service of the hospital was then committed, saw me apply it upon a young woman who laboured under a paralysis of the deltoid muscle. This paralysis was spontaneous; the young patient had experienced it for the first time a few years before, and the dis-

ease had then yielded very slowly to the use of various means, different to the moxa, persisted in for several months. It had not long relapsed when I saw this young patient. Certainly the moxa was not in this case a matter of rigorous necessity, neither was it an urgent affair to have recourse to it: we could only expect from it more prompt results than from any other method. A few days after the application, which was made immediately below the acromion, the movements of the arm began to be re-established.

At Guy's Hospital, one of those which I have most frequented, because at this time, a man, who joins to extensive knowledge a great degree of activity, Mr. A. Cooper, is there giving to surgery the greatest *eclat*, several patients affected with white swellings of the knee, were found under such circumstances, as to induce a trial of the moxa. Mr. Cooper desired that I would apply it, under his inspection, upon a young woman who was suffering very severe pains outside the rotula. It was upon this very point that I burned a cylinder of cotton, of a tolerable size. The pain diminished so much and so quickly in the place where the moxa was applied, that a few days after, the patient expressed to Mr. Cooper in my presence, her willingness to support more applications of the moxa, if it should be judged necessary for her cure; she appeared even to wish that a fresh one should be immediately

applied on the inside of the joint. In this young woman the disease was too far advanced to give any well-grounded hope of a favourable termination: it would, in all probability, continue to make some progress, but a progress more slow and indolent, and particularly accompanied with pains that would be more supportable. I warned them, from what I have learned by experience on this head, that such only would be the result of the application of the moxa under these circumstances; but I announced them as results nearly certain. Should the event justify my prediction, the English surgeons will doubtless feel less repugnance in future to the use of the moxa; and perhaps I may have done something towards naturalizing amongst them this remedy so heroic, so powerful, under all circumstances. May I say it *en passant?* The application of the moxa is not so cruel, but that many persons are seen to support it for the first time without giving any marks of violent pain, and others, who appeared to suffer more, have shewed very little reluctance to the repetition of it a number of times successively.

During my stay in London, Mr. Brodie, a young surgeon already known among us by some ingenious researches in Physiology, and who holds a high rank as a practitioner, had occasion, at the Hospital of St. George, where he replaces Mr. Home, whom he promises to be worthy of succeeding, to make

the ligature of a polypus of the nose behind the *velum palati*, in the superior part of the pharynx. It was the first time he had met with such a case. Not having yet decided which of the different methods to adopt, he condescended to ask my advice. I pointed out to him the method of Desault, not as being absolutely the best of all those that have been contrived for including in a ligature the pedicle of a polypus of this nature, and deserving an exclusive preference, but as being that which I had several times adopted with advantage. I shewed him the mode of accomplishing this; and if Mr. Brodie paid me a great mark of deference in employing it on my recommendation in preference to other methods with which he was acquainted, he has likewise furnished me this opportunity of observing in him a true surgical talent, by the confidence and precision with which he executed the operation, which, on account of the bulk of the tumor, was not without some difficulties.

The same Mr. Brodie and some other surgeons were desirous of seeing me apply some of our apparatus for fracture. I applied several times particularly the bandage of Desault for fracture of the clavicle; and I was able to convince the English surgeons, as I was myself convinced, that this apparatus well applied, is more solid than it appears to be, that it has not the inconveniences attributed

to it, and that it is not so ineffectual as has been pretended.

There is in London, as I shall have occasion to remark more particularly hereafter, an infirmary destined exclusively to the reception of diseases of the eyes. Two gentlemen of real merit, one of whom I have already mentioned, M. M. Travers and Lawrence, have taken the place as surgeons, of Mr. Saunders, who was the founder of this establishment. Beside, that each time I have been present at their consultations, and accompanied them in their visits, they have requested to know my opinion in embarrassing cases of diseases of the eyes, they expressed also a desire to see me perform the operation for the cataract. I twice performed it in their presence, and each time by the method of extraction; a method, shall I say it here, for which I have a difficulty in preserving myself from a degree of predilection; a method in which every operator finds, more than in the depression, occasion to shew a manner peculiar to himself, and in which beside may be better observed, either a natural dexterity, or one acquired by habit. M. M. Lawrence and Travers thought proper to pass some eulogy on the manner in which this operation was performed. I speak it without fear of being accused of self-love: what merit, in fact, can there be in performing well, or even in the best possible manner, an operation so simple, and to which it is only

the interest of professed oculists to attach a great importance; an operation which every day furnishes the opportunity of practising, and which, in my own practice, I have performed, perhaps, about five or six hundred times.

I have hitherto only wished to make known, by some few instances, the honourable manner in which I have been received by the London surgeons, and I have already mentioned the names of several of the most distinguished of our profession: but many more are to be added to these; and I believe, that any one of us who might visit London, would be surprized, as I was, to find there so great a number of truly able men, surgeons of most extraordinary merit, and that even in comparison to the population of London, which is more considerable, as is well known, than that of Paris. The names of Everard Home, of Cline, Henry (*William*) Blizard, Lynn, Abernethy, have been long known to us. These surgeons still exist: it is with them that Astley Cooper, who was the disciple of some of them, and who began his career with the others, shares the high reputation. M. M. Brodie, Travers, Lawrence, of whom I have already spoken, and M. M. Charles Bell, Henry Cline, Thomas Blizard, Young, M'Gregor, belong, if I may so express myself, to another generation, to a generation more recent, which promises to England surgeons not less illustrious than those I have mentioned in the first

place: almost all of these are at the head of hospitals, to which post they have been called by their merit; almost all of them have already signalized their zeal for the progress of the art by useful works, which are the pledge of the highest expectations.

There is a treatise on Hernia by Mr. Lawrence.* The author was too young a practitioner to have added to it many things peculiar to himself, but he has known how to take admirable advantage of the experience of others, and has especially well availed himself of whatever the English surgeons, in these latter days, have added to the history of hernia. It is, in my opinion, the best of any didactic work on hernia. I should wish to see it translated into our own language; it would be, if not for the masters of the art, at least, for the younger surgeons, preferable to the treatise of Richter, which is already antiquated, and more useful than the work of Scarpa, which is, as is well known, only a series of memoirs (of the most instructive kind indeed), on some particular points concerning hernia.

Mr. Brodie, who, to a taste for physiological experiments and researches, unites great surgical talent, has already given a tolerable number of well made observations upon that disease of the joints,

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* A Treatise on Ruptures. *London*, 1810.

known to us by the name of white swelling*; observations, however, from which he has drawn consequences, which are more ingenious than useful.

Mr. Travers, the favoured disciple of Astley Cooper, and who is worthy of such a master, has published in a work much esteemed by English surgeons, and which deserves to be known amongst us, the results of some curious researches and experiments on wounds of the intestinal canal. †

Mr. Charles Bell, brother of John Bell of Edinburgh, and whose name calls to mind that of Benjamin Bell, one of the most enlightened surgeons England has produced since Pott and Hunter; Mr. Charles Bell, I say, is not only one of those men who cultivate anatomy with the greatest zeal at London, where he has not very long since fixed his residence; I doubt not but he will be in a short time one of the most celebrated surgeons there. He is the author of an Epitome, a kind of manual of operative surgery, which has lately appeared in England, and which is justly esteemed. ‡ He has written on the Organic Diseases of the Urethra, a work which excites some interest. I can vouch for the accuracy of the researches, the results of

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* Pathological Researches respecting the Diseases of the Joints.

† An Inquiry into the Injuries of the Intestines.

‡ System of Operative Surgery.

which serve as the basis of this work. All the pathological preparations engraved in his works, may be seen preserved in the very beautiful Cabinet of Anatomy belonging to Mr. Bell. In fine, I have seen performed, by Mr. Bell, several important operations of Surgery, both at the Middlesex Hospital to which he is attached, and in his private practice. He is one of those few, among the London surgeons, in whom I have recognized, in performing operations, what I should willingly call the French manner; grace without affectation, and a continued attention to do every thing, in order to arrive quickly at the termination of the cruel act which constitutes every surgical operation, without appearing to use any precipitation.

It has been, then, a very singular circumstance for me to have seen at London, surgery cultivated, and, if I may be allowed the expression, represented by so great a number of able men. I do not think that I am deceived; the English carry to a higher pitch than ourselves the taste for surgery; and, what appears incredible, this taste prevails even amongst persons whose situation in society, and professions, would seem to render it altogether foreign to them. I have been told, that men of fashion, even those in high rank, habitually frequent the places where anatomy and surgery are taught; in the theatres, particular places are reserved for them: and to speak only of surgeons, properly so

called, it is true to affirm, that they manifest for our art a real enthusiasm, and cultivate it with passion. There are some hospitals in London which I have never once entered without seeing the chiefs surrounded by other surgeons of that capital, or practitioners of distant towns, whose business had brought them to London, men already ripened by age and experience, each showing themselves curious to see, and observe, and eager to acquire fresh knowledge. Foreigners do not remark the same thing amongst us; it might even be said, that it is extremely rare to see our young physicians or surgeons, after having once quitted the schools, frequent the places where they have received their first instruction.

If any thing can contribute to keep alive the taste for an art or a science, to extend its progress, and to make a greater number of men excel in it, is it not that those who cultivate it should live in a perfect intelligence together; that they should compose one family; that they have frequent meetings with one another, in which each one, sacrificing his own private interest, brings, without pride, or without presumption, the fruit of his own reflections; that, strangers to the arts of intrigue, and never giving their minds to the vile insinuations of envy, they should rival one another only in zeal and knowledge? Well, this fraternal spirit, this absence of all jealous rivalry; and more, an ardent desire to communicate, reciprocally, their views, their

thoughts, exist in a very high degree amongst the men who are at this moment the honour of medicine and surgery at London. This is what I have observed by being amongst them, I will not say with surprise, but with the highest satisfaction. To these common sentiments is joined, on the part of those men already advanced in their career, an esteem altogether peculiar, for those whose reputation is but beginning; and on the part of the latter, the greatest regard, the most sincere respect for those who were their masters.

Other causes, and doubtless of a more powerful nature than those I have been speaking of, contribute to the multiplying, in London, and probably throughout all England, the men distinguished in surgery. Our profession enjoys there a high consideration. It is especially since the time of John Hunter that it has acquired it, and that surgery has been placed at least in the same rank as medicine.

The number of surgeons, who may be placed at the head of each hospital, is not restricted, as with us, to one, two, or, at most, three; there are hospitals to which four, five, and even six surgeons are attached. By this means, several men are enabled to take advantage of the same opportunities of observing and acting.

Lastly, London possesses a very great number of hospitals, properly so called, and amongst which there exists, if I may be allowed the expression, no

hierarchy, I mean to say, no gradation in point of the importance and reputation which they enjoy: or rather, that gradation exists, but is not immutably established; it changes from one period to another, and follows the variations which the zeal or merit of the surgeons succeeding to each other in these different establishments must necessarily present; and since, by reason of the independence of the numerous hospitals in London with respect to one another, each establishment aspires to preserve the degree of reputation they already enjoy, or even to acquire still greater; the choice of the men on whom this reputation is to depend is made with great severity among the young surgeons who give the greatest hopes.

Thus I am naturally led to speak of the London hospitals, considered in themselves, considered likewise with regard to education, which is almost entirely concentrated there, both as to medical and surgical instruction, of which they are almost the exclusive source: such will be the subject of the First Part of this work.

PART THE FIRST.

HOSPITALS, AND SURGICAL EDUCATION IN LONDON.

IT is a circumstance generally known, and deserving the highest panegyric, that the English nation possesses great predilection for benevolent establishments, and takes great interest in those establishments. Without reckoning the alms-houses or asylums consecrated to the infirm and the aged of both sexes; without including either the dispensaries, in imitation of which our own have been formed within a very few years, there are in London twenty-two hospitals, properly so called, destined to the reception of sick and wounded; and, in the greatest number of them, lying-in-women are received. Such at least is the number mentioned by Highmore, in a publication on the benevolent and charitable establishments existing in London.

None of these hospitals is so considerable as our Hotel Dieu formerly was, or even as it is at this

moment: but at the same time, none of them is so small as some of ours are. They are all, or rather each one in particular, intended for three hundred patients at the least, or five hundred at the most. We may thus calculate, at nine or ten thousand, the number of patients which the London hospitals habitually contain. This number, which is double that of the patients that could be admitted into the Paris hospitals, is only just proportioned to the population of the capital of England. London then exhibits, reduced to practice, the system, in favour of which Cabanis had published, in the beginning of the Revolution, a small work, in which the principles of a mild philanthropy are united to the most correct views on the management and administration of hospitals, and to the most profound and extensive knowledge of medicine.

At the same time, the multiplicity of the London hospitals, and the limited destination of each of them, with respect to the number of patients, are less the result of a general plan or system, than of the manner in which these establishments have been founded, and of the manner likewise in which they are still kept up. Two or three of them only are Royal Hospitals, that is to say, founded originally by the State, and, at this day, still maintained partly at the expence of the Government. All the rest have been established by private persons, and their riches consist in the produce of annual subscriptions, in ad-

dition to the legacies of the founders, and of ancient subscribers. It may be readily conceived, that one private person, or even several combined, could only found hospitals of a limited extent. It is a great thing that the greatest part of them are so considerable as they are.

In this number of London hospitals, the infirmaries of some great establishments founded by the state, are not included. The most remarkable relating to the object I have in view, and the only ones beside which I have visited, are the Greenwich Infirmary, or the Hospital of Invalid Sailors, and that of Invalid Soldiers, which is in London itself, and the infirmary of each of the two houses established, one at Greenwich, and the other in London itself, for the children of sailors and soldiers. The least considerable of these two infirmaries is, that of the Hospital of Invalid Soldiers. This hospital, which scarcely deserves curiosity after having seen Greenwich, furnishes an asylum to only four or five hundred invalids: scarcely, indeed, is it filled at all times, the pensions for old or mutilated soldiers being sufficiently considerable to induce them to prefer retiring into the bosom of their families.

The Royal Military Asylum for the children of soldiers, is situate near the Hospital of Invalids at Chelsea. In this establishment, where fifteen hundred children are brought up, every thing excites admiration. Shall I speak of the beauty of the

monument destined to so important a purpose? Of the neatness which reigns in the interior? Of the discipline which this little world of children are bound to observe, and which they observe so perfectly? Shall I say, that from the nature of the different kinds of work to which they are subjected, these children of both sexes are sufficient of themselves to the making of all the objects necessary for their support? Shall I say also, that they follow, for instruction, the method of Bell, the advantages of which, are confirmed in England, a method which has a great resemblance to that of Pestalozzi, and which, as well as this latter plan, is more especially calculated for the education of children collected together in a more or less considerable number: a method which, in a short time, will become more general in England than it now is, if the project be carried into execution which has been formed for establishing in each regiment of the army, a school for the education of the children of the regiment? Details on all these subjects would be misplaced here; they would, however, make known nothing but what was worthy of a nation, opulent and generous, and perhaps in a greater degree than any other, incessantly occupied about whatever may increase its glory, and contribute to its prosperity.

It was in this establishment that the first facts were noted concerning the species of ophthalmia,

which the English surgeons have called the ophthalmia of Egypt, because they supposed, and still continue to suppose, that it originated from the inflammation of the eyes which affected so great a number of French and English soldiers during their service in Egypt, an ophthalmia to which they attribute a contagious character. When I visited the Royal Military Asylum, Mr. M'Gregor, who is the surgeon of it, shewed me several children labouring under an inflammation of the conjunctiva, which, he said, was the ophthalmia of Egypt. On this account, these children were kept separate from the other patients of the infirmary. We have heard too much of this kind of ophthalmia, especially in consequence of the journey to France lately undertaken by an oculist of London, Mr. Adams, and our opinions have hitherto received too little light on this subject, for me to neglect, when speaking of the establishment, where the disease appears to have been observed with the greatest degree of care, to avail myself of the opportunity thus presented, of making known the results of these observations.

That there has reigned for several years past in England, principally in the army, and in the Royal Military Asylum of London, an epidemic ophthalmia of a peculiar character, is a circumstance on which it is not possible to raise the least doubt. It appears, moreover, that though it is now less frequent than it has been for several years past, it still con-

tinues to shew itself, from time to time, in some persons, both children and adults; and if we adopt, as a demonstrated truth, the opinion of the greatest part of the English observers on the origin of this ophthalmia, and its contagious nature, the cause will exist as long as any English soldiers remain in the country, having still the species of ophthalmia which they contracted during their stay in Egypt, and in whom the disease is become incurable. I shall only speak of what took place at the Royal Military Asylum. The disease began to shew itself in 1804, in the month of April; the number of children affected with it went on increasing to the month of August successively: in this month, for instance, it attacked sixty-nine boys and twenty-one girls. It became afterwards less and less frequent in the latter months of the year. On the whole, from the beginning of April to the end of December, three hundred and ninety-two children, two hundred and ninety-seven boys and a hundred and five girls were attacked with it. It rarely shewed itself in the years 1805, 1806, 1807, and 1808, and only in the spring, summer, and autumn. It scarcely existed during the winter of each of the three first years, and every vestige of the disease had disappeared during the year 1808, when, in the month of June, the temperature being extremely elevated, it returned with great violence. Before the end of December, sixty-eight boys and a hundred

and seventy girls had been attacked by it. Being again suspended during the months of January, February, and March, of 1809, the disease appeared again in the month of April, and made so great a progress, that in the month of November there were under treatment two hundred and forty children. The same thing took place in 1810; the ophthalmia was extremely rare from the beginning of the year till the month of April: its progress since this last period, although it continued during the following months, has been nevertheless greatly retarded by the precautions that were taken to place the children, as soon as they were attacked, in a house entirely separated from the Military Asylum, and to transfer with them the whole of their clothing, and every thing appropriated to their use.

The disease constantly exhibited the same appearances and the same character, differing only in the degree of violence. The attack took place in the evening, and first shewed itself by an itching of the edges of the eyelids. To this succeeded a sense of stiffness, which was felt by the children the next morning. From that time, the eyelids became tumefied externally, their internal surface inflamed, and the glands of Meibomius appeared larger and redder than in their natural state. The lachrymal caruncle was also very large, and of a bright red colour. After four-and-twenty or thirty hours, a copious discharge of puriform mucosity took place;

then the vessels of the conjunctiva likewise appeared distended, and in a short time the coat itself became considerably tumefied, and raised in a projecting cushion around the transparent cornea, forming *chemosis*. In a great number of the young patients, the integuments of the eyelids appeared to partake of the inflammation; at least, they exhibited a very strong red colour, which extended in every direction round the eyelids, and which, from its appearance, and the manner in which it was circumscribed, bore some resemblance to the aureola of the pustule on the ninth or tenth day after the vaccine inoculation. When the puriform discharge from the eyelids was very copious, it excoriated the cheeks. The patients suffered without interruption severe pains, which were increased by the contact of light, even when the eyelids were closed.

The disease was never preceded by any general symptoms; but, two or three days after the appearance of the local symptoms, a general derangement of the functions came on, and this was in proportion to the intensity of the inflammation. This commonly began to decrease on the tenth, twelfth, or fourteenth day. But even when it appeared to be altogether terminated, the eyes preserved, for some time, a quick sensibility: it frequently was not till after six weeks or two months that the children were entirely recovered. Sometimes the disease was prolonged by ulcerations, which formed on the

internal surface of the eyelids, or on the cornea. The *albugines,* or specks which succeeded these ulcerations, when they happened to form upon the cornea, were not always incurable; on the contrary, owing to the youth of the patients, these specks disappeared in time, or yielded to a suitable treatment.

The ophthalmia in question was more violent in hot than in cold weather; and it was observed to be accompanied with more severe symptoms in children of a lax habit, or lymphatic temperament, and still more in those affected with a scrophulous taint. It is a singular circumstance, that if one eye only was affected, it was much oftener the right than the left; and when both were attacked, the right was commonly the worst. The progress of eruptive diseases, such as the vaccine, measles, &c. which might exist before the attack of ophthalmia, or which appeared after its commencement was not in any manner interrupted. This disease, called the *Egyptian Ophthalmia,* has not appeared in children only; a number of adults, as will be seen presently, have been affected by it. In menstruating women, the symptoms experienced a remarkable increase of violence during the days immediately preceding the mestrual discharge: on the other hand, they diminished rapidly during its continuance. Since I have noticed this peculiar circumstance of the disease in adult subjects, I must

likewise observe here, that it shewed more violence in them than in children: its consequences were also generally more serious. For instance, out of more than twelve hundred children, which were the subjects of Mr. M'Gregor's observation in the Royal Military Asylum, six only lost the sight of both eyes, and twelve of one eye: a report made by Dr. Vetch, on the contrary, states, that out of a battalion of seven hundred men, six hundred and thirty-five of which were attacked with the ophthalmia in the course of a year, between the month of August, 1805, and the same period in the following year, fifty remained blind, and forty lost one eye.

This ophthalmia, which was so general in the Royal Military Asylum from 1804 to 1810, has, since this last period, attacked but a very small number of children. This, it is affirmed, is the consequence of the precautions taken for preventing the introduction of the principle of the disease from without, as they conceive it to have been communicated, and that it may still be so by soldiers returned from Egypt, who have contracted, during their stay in that country, an incurable disease, whether accompanied with loss of sight or not. The precautions, likewise, taken to prevent the intercourse of those children who have felt the first symptoms of it with the rest, have, without doubt, contributed greatly to this result, if it is true that the disease is contagious, especially that it is more so

in the acute, than in the chronic stage, as has been pretended to be observed.

This contagious character of the ophthalmia, which has raged epidemically in the Royal Military Asylum, appears to be well established; not, indeed, by experiments; it would not have been allowable to attempt them, but by the collation of different facts which have been observed during the course of the epidemic. The following are the principal, or the most conclusive. When the disease commenced in 1804, it was observed, that it did not attack all ages and classes which happened to be in the establishment, as would probably have happened had it originated from general causes: the boys were first affected; afterwards the girls; and, at a still later period, the adult persons attached to the establishment. Such of this last class, as had no communication with the children, had not the disease; whilst of the persons appointed to superintend the children, or to attend upon them, one of the assistant-surgeons alone escaped it.

In the month of August, 1804, which was the month in that year in which the greatest number of children were attacked by the disease, two young boys, brought from Scotland by their mother, had been admitted into the establishment; both of them had the ophthalmia the fourth day of their entrance.

The greatest number of young patients during the same month of August, was of the division of

children from five to seven years of age: it was also observed, that in those who were affected, the disease appeared successively, following the order in which the children were placed one after the other in their dormitory: so that it appeared to communicate itself from one child to the next who slept nearest to him, doubtless because the two children nearest to each other had more immediate communication with each other than with any of the other children; and also because they were placed in the same atmosphere, and the air could easily transmit from one to the other the principles of the contagion: doubtless, in fine, because many articles appropriated to the ordinary uses of life, were common to them both.

The following fact establishes still better the contagious character of this disease, and shews, at the same time, that it was more certainly and more readily communicated by immediate application of the puriform matter which flowed so copiously from the diseased eyes, to the conjunctiva of a person in health, than by any other mode of transmission. It had been thought serviceable, amongst other means as well local as general, in the treatment of this ophthalmia, to inject frequently under the eyelids some emollient and slightly narcotic liquor, for the purpose of drawing out the puriform matter, which, without that precaution, would remain upon the eye, and add to the irritation. The care of the in-

jections had been committed to the nurses of the infirmary. If proper precaution was not taken, the injected liquor would rebound from the patient, combined with the puriform matter of the eyelids upon the eyes of the person injecting; a circumstance which happened at three different times to three nurses of the infirmary: all three had the ophthalmia, and in all three the symptoms made their appearance only twelve hours after the accident, although they had made use of the only remedy to prevent the contagion, that is, repeated washings of the eyes.

Lastly, it appears to the English physicians and surgeons to be demonstrated, that the principles of this contagious ophthalmia have been brought from Egypt by the English soldiers. It is moreover asserted, that the medical officers of the English army in Egypt had already ascertained that the ophthalmia which was epidemic amongst the troops, propagated itself likewise by contagion. The first appearance of the disease at the Military Asylum took place precisely at the period when that Asylum was regularly frequented by soldiers returned from Egypt, who came there to visit their children. At the same time, the same disease declared itself with precisely the same character, not only amongst a great number of the inhabitants in all the towns in England where the soldiers returned from Egypt had penetrated, but also in other countries, in Sicily, Malta, Gibraltar, wherever the English troops disembarked.

It was also observed in a great many different regiments of the army, which had not quitted England; but in which had been incorporated some soldiers, who formed part of that expedition; and I have related above, that in only one battalion of the 52d Regiment, which consisted of seven hundred men, six hundred and thirty-five had this ophthalmia in the space of one year. Every-where, and under all circumstances, it shewed itself with the same character, accompanied with the same symptoms, distinguishable by its violence, and the rapidity with which the inflammation rose to the highest degree, by its peculiar qualities, and especially by the quantity of puriform discharge from the eyelids, by the existence of small tubercles, of granulations upon the conjunctiva, owing, no doubt, to the development of the mucous *crypts* of that membrane. It was also distinguishable by the rapidity with which it formed upon the cornea, especially of adult subjects, ulcerations and specks; or even with which the eyes were entirely destroyed by the suppuration of their internal parts by the very quick sensibility which, in the most simple cases, these organs preserved for a long time after the cessation of the inflammatory symptoms. All these circumstances establish a resemblance sufficiently striking, as well with respect to the progress, as to the symptoms, between this disease and the ophthalmia arising from gonorrhœa, or that which we frequently see succeed

to the suppression of *Syphilitic Blennorrhagia*, and which is, in some instances, produced by the accidental application of the discharge upon the conjunctiva.

But why has not the return of our troops into France, who likewise encountered the burning soil of Egypt, and who were even longer in this country than the English, been the occasion of the production of the same disease? A great many of our soldiers, on their return to France, were affected with chronic ophthalmia, consecutive to the acute disease which had been epidemic, and produced so great mischief in the army of Egypt. In a great number, the influence of their native climate has been sufficient to dispel even the minutest traces of this disease; in others, on the contrary, it was perpetuated into the chronic state, whether attended or not with the loss of one or both eyes; and a great many of our invalids have retained this complaint. But it has never been seen that these soldiers returned from Egypt, have communicated a contagious ophthalmia either in the regiments with which many of them have been incorporated, or in the hospitals of invalids where others have obtained their retirement, or lastly, amongst persons belonging to the different classes of society. This is the objection which has been made, and which we are authorized to produce against what the English think relative to the Egyptian ophthalmia, and what they say

they have observed. It will always be asked, how the same disease, produced under the same circumstances, and shewing itself originally with the same characters, can have been contagious in one country, and not so in another. Could it be that the climate of France was less proper than that of England, for making this kind of ophthalmia, after being some time in a chronic state, pass again into the acute, and giving a new temporary activity to the contagious principle? For it must be known (and this is the last remark I shall make on the Egyptian ophthalmia, reporting still what the English medical men pretend to have observed), that this ophthalmia having become chronic, after having existed at first in the acute state, is capable of putting on again this last character, and that several times over in the same person, from any of the causes capable of adding to the irritation of which the conjunctiva is habitually the seat, such as deviations from regimen, a particular state of the atmosphere, &c. that whilst it preserves the chronic character, this ophthalmia is scarcely, or very difficultly, contagious; but that its contagious character re-appears, and preserves a great degree of activity during all the time that the acute stage remains, always accompanied by a copious discharge of puriform matter. It is believed, that by the renewal of the acute stage, the disease has been transmitted by the English soldiers returned from Egypt, to so great a

number of persons of all ages who have had any communication with them. It is by the relapse of this acute state, that at the present time the same soldiers, or other persons who have the disease at second-hand, if I may be allowed the expression, are always liable to communicate it. It is in this manner, they pretend, that it re-appears from time to time in the Royal Military Asylum. Perhaps its source is inexhaustible, if there are always to be persons in whom the disease, having been chronic and incurable, may take upon itself from time to time the acute character. Such is the ophthalmia of Egypt, according to the manner of seeing and thinking of the English physicians and surgeons.* I have spoken of it on account of the Royal Military Asylum, where the children of soldiers are brought up, and shall go on, with what I had the intention of saying, with respect to the infirmaries of some great military establishments.

The hospital for invalid sailors is at Greenwich, several miles from London: there likewise is found another royal military asylum, which does not differ from the preceding, except in being destined to the reception of the children of sailors: the same

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* What has just been read, is extracted from a Memoir of M'Gregor. *Vide* Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge, vol. iii.

regulations, the same regimen and system of education, as in the royal military asylum of London; only, that in the establishment at Greenwich, as the boys, who are sailors' children, are destined to be themselves sailors, every thing is put in practice to excite in them a taste for their future profession. It was a happy idea, to place near to one another, the place of retirement of one generation of sailors, and the cradle of another. Even the situation itself of these two establishments could not have been better suited to their destination. From Greenwich is seen the Thames, covered with thousands of vessels: under the walls of the hospital of invalid sailors, which is overlooked by the asylum for the children, pass ships without number, which are arriving at London, or departing from that city to distant countries. What can be more proper than such a picture to keep up in the minds of the invalid sailors the remembrance of past things, which, to men in the decline of life, and especially to warlike men, forms the principal charm of their existence! What, likewise, can be more proper than such a picture to fortify in the children those dispositions, already naturally so great in the English, for a maritime life!

The infirmary of the Hospital for Invalid Sailors, established in a separate building, does not correspond with the rest of this edifice, which for grandeur and magnificence of architecture, and for

the solicitude of which the old and infirm sailors are the object, is scarcely inferior to our *Hotel des Invalides*. Instead of wards, more or less spacious, which would present many advantages, both for convenience of service and for salubrity, this infirmary consists of a great number of small apartments, destined each to the reception of four patients, receiving light only on one side, and having their entrance into a gallery which is rather dark. At the time I visited this infirmary, there was a surgical case, a little curious, of very extensive gangrene of old age, in one of the invalids, seventy years old. The foot, and the whole left leg, were in a state of mortification: amputation had been performed immediately above the knee; the great arteries of the limb did not furnish any blood, and it became consequently useless to apply a ligature. The surgeon, who shewed me the infirmary, considered this last circumstance as one of the most remarkable facts, as a phenomenon altogether incomprehensible. I did not partake in his surprize, but just recollected, on this occasion, that, last year, a surgeon had transmitted to our Society of the Faculty of Medicine, the observation of a fact very similar, from which he deduced, as a consequence, the inutility of ligatures upon vessels after amputation. Like him, the surgeon at Greenwich, without doubt, was ignorant that the circulation is always extinct in a gangrenous part, and that almost con-

stantly also *coagula* extend in the great branches of arteries, above the limits of the mortification. That is the reason why there is no hæmorrhage, even when amputation is performed in the living parts, at no great distance from the gangrene.

I now return to the civil hospitals of London. A small number of them are destined to the treatment of certain affections exclusively: such are only, Bethlehem, for lunatics, the Lock Hospital for venereals; an infirmary for the treatment of diseases of the eyes; an hospital for cancerous diseases. With the exception of the hospital for lunatics, these hospitals are not so established for one certain disease, or one species of diseases, but that a great number of persons, labouring under the same affections, might be admitted into one of the other hospitals. This is particularly remarkable in the case of venereals. Particular wards are destined for a certain number of venereal patients of the necessitous classes in almost every other hospital as well as the Lock; and this one is extremely small, considered in relation to the immense population of London, and the frequency of syphilitic diseases, still greater, as I am assured, in this capital than in our own.

It may be said, that at Paris likewise, where there is an hospital for venereals, nearly large enough for the persons whose poverty obliges them to claim the public beneficence, and in which only

these patients ought to be admitted, still they are always to be found in the other hospitals, and are there even confounded with the rest of the patients. It is an infraction of the rules of our hospitals, but a legitimate infraction, and for which an excuse may be found in the difficulty frequently experienced in distinguishing, at the first view, the syphilitic character of local affections. The venereal disease, a real Proteus, especially where the habit has been long infected, masks itself under so many forms; many of the symptoms depending on it, are at times so little marked, and assume so equivocal an appearance, that even supposing there may be room to suspect its real character, still nothing short of the success of the anti-venereal treatment can dispel all uncertainty. This treatment is then a means of illustrating the diagnosis of the disease. These doubtful and embarrassing cases of venereal disease are kept in other hospitals beside that destined to the reception of venereal patients, and more especially where clinical surgery is established, in order to serve for the instruction of the pupils.

There are also, in London, special hospitals, which we have not at Paris, as, on the other hand, we have some which do not exist in London. But what is more remarkable, the end of the institution is in ours, almost perfectly accomplished: in the special hospitals of London, there is still much to be desired; the essential defect is, that each of these

hospitals, although especially and exclusively established for the treatment of affections of a determinate kind, is not the only one where persons afflicted with these complaints can be admitted; and this defect, as well as several others, extends to the general system of the London hospitals, which, being independent of each other, and having no connexion between them, are regulated and governed by so many private administrations. Notwithstanding that such a system may be not without some advantages, yet there are still greater in having the numerous hospitals of a large city to constitute one whole, submitted to one common or general administration. Since this has been the case in the hospitals of Paris, how many ameliorations have they not experienced, which would not otherwise have taken place, or, at least, at a much later period! Shall I mention some few of them.

One of these advantages is, that the enormous disproportion which existed for so long a time between the number of patients of all ages and sexes, condition, and country, and the place allotted to their reception, in which four, and even six patients shared one couch, where might be seen the dying, and even the dead, extended by the side of the unfortunate wretches who ought to recover from their complaints. In a word, the Hotel Dieu, which contained formerly four or five thousand patients, is no longer intended for a greater number than a

thousand, or eleven hundred. A hot-bed of infection, a place truly impure, is changed to an asylum, such as ought to be offered to a suffering and unfortunate man, and which now labours under no other disadvantages than that of standing in too confined a place, and being too near the river.

Another hospital, which had been for a long time simply a place of discharge, a sort of ease to the former one, has received a destination better defined, and more useful: I refer to the Hospital of St. Louis, at present set apart for the reception of chronic cutaneous diseases, scrophulous and scorbutic complaints, of such cancerous affections as have arrived at that pitch which excludes all idea of curative attempts by surgical means, in a word, of different chronic affections, excepting those which attack the viscera. A perfect order has been established; men of talent have not disdained to receive appointments there as physicians and surgeons; and this last circumstance, no doubt, has contributed no less than the first, to give to the Hospital of St. Louis a kind of celebrity, so much the more remarkable, as this hospital, a few years since, was the object of general aversion. It is there that M. Alibert collected the materials for his great work on Cutaneous Diseases, one of those modern works of which French medicine has most cause to boast.

It is, in some degree, contrary to decency, and

prejudicial to good manners, that children should be confounded in a hospital with adult patients. And beside, sick children, even those that have passed the period of suckling, require particular attentions, which it is hardly possible to shew to them, unless they be separated from persons of more advanced life. Great advantages might have been obtained in both these respects, by appropriating, in each of the hospitals of Paris, or only in some of them, a ward, or place of greater extent, to sick children. Instead of which, in the hope of still greater advantages, a hospital has been established exclusively for them. They live in a purer air than that of the adult hospitals, and enjoy a number of other advantages of *hygiene*, which is so great a resource in the diseases of infancy. It must, however, be observed, that in this foundation for sick children, the interests of the medical art have been sacrificed: it is doubtful, at least, in my opinion, whether the particular observation of the diseases of infancy be so useful and so fruitful in results, as a comparison of the diseases of all ages might be, made by the same observers on great numbers of persons concentrated together.

The greatest, as well as the most happy, of the changes which have taken place, I might say, almost unexpectedly, as they had been so often called for before the hospitals were all placed under one administration, have been introduced into our lu-

natic houses. Our two principal establishments of this kind, that of the Bicêtre and the Salpêtriere, would leave nothing to be wished for, if they were entirely isolated; if each of them were not attached to establishments of another nature. It excites, I know not what kind of painful emotion, to see insane women occupying a part of an edifice which serves for the retreat of thousands of women worn out with age and infirmities. The mind revolts, when it considers that the Bicêtre, where there are in one part madmen, and persons with epilepsy, in another, unfortunate old men, known by the respectable name of *bons pauvres*, serves also as the temporary abode of men covered with ignominy, whom society rejects from its bosom.

Amongst the useful innovations introduced by the general system of hospitals in our capital, we must not forget the foundation of a Venereal Hospital, much more considerable than that of London, and of two convalescent houses (*maisons de santé*), one annexed to this Venereal Hospital, and destined exclusively also to the treatment of syphylitic diseases; the other, without any exclusive destination as to the kind of disease; both of them extremely well adapted to the wants of such patients, as are not in very easy circumstances, but can make some sacrifices, and have too much delicacy to come into a hospital, to take up the place and patrimony of the poor.

In how many instances also has the administration shewed itself solicitous about whatever could contribute to the advancement of medicine and surgery, and especially for every thing that can promote the progress of those who are just entering on the difficult career of the art of healing! Associating, if I may so express myself, their efforts with those of the persons who are the depositaries of education, it has designedly multiplied, in all the different hospitals, the subaltern situations, which are made lucrative to those who hold them. These places are obtained by examinations, an effectual method of keeping up emulation amongst our young pupils: rewards are promised, and granted to those who, in the simple accomplishment of their duty, have discovered the greatest zeal and capacity. How different this to what passes in the London hospitals. The students give very considerable sums for having the liberty to frequent the hospitals, and not all the hospitals indiscriminately, but only one of them, or each particular one. They pay still dearer for the privilege of dressing. Add to this, that some clinical courses, both internal and external, to which all the pupils are free to attend, are organized in some of our great hospitals; none, absolutely not one, of the courses given by the physicians and surgeons of the London hospitals, are gratuitous: they are not so even to those of the students who have obtained the right of frequenting

one of these hospitals where these courses are given: and, nevertheless, in London, the hospitals are almost the exclusive sources of medical and surgical education.

But I have here, without thinking, anticipated what I have to say further, concerning the present state of education in medicine and surgery in London, and have, in some measure, wandered from the subject I have in view. I was hurried away in giving a rapid view of the principal and most fortunate of the changes that have taken place in our hospitals within these five-and-twenty years: I wished to impress the signal advantages to be derived from the union of the numerous hospitals in a large city like Paris, under one and the same administration: I wished to extend that system which consists in forming out of these numerous asylums one whole, the parts of which being perfectly connected, and exactly proportioned between themselves, appear to exist, and do indeed exist one for the other: I wished, indeed, to propose ourselves to the English as an example and a model. But, no; the entire independence in which the London hospitals are of one another, the existence of all of them as so many particular establishments, having no relation between them, no sort of connexion is too conformable to the taste and genius of the English nation, to undergo any alteration. Such a system favours too much this disposition, this propen-

sity of individuals, to be constantly kicking against the influence of supreme authority, to render themselves, as much as possible, independent; and to acquire, in whatever respects public affairs, privileges, prerogatives, and influence, which they owe, in some measure, only to themselves: it will subsist for ever.

A month's stay in London is too short to visit particularly all the hospitals of that capital; but, wishing more especially to become acquainted with the state of surgery in England, I thought it best to visit those more particularly to which the talents of the surgeons, at this moment, give most celebrity. Those which I have frequented most are Guy's, St. Thomas's, the London Hospital, St. Bartholomew's, the Middlesex, and St. George's. I have, however, seen almost all the rest.

As buildings, the hospitals of London exhibit, at least, regularity of plan in their construction, and an elegant simplicity. Many of them, in which a great luxury of architecture has been displayed, ought to be reckoned in the number of the most remarkable monuments of a city truly poor in beautiful public buildings. In this respect, none of our hospitals can be compared to those of London. I speak, however, only of those at Paris: some of the great towns in France exhibit hospitals which are the astonishment and admiration of strangers.

We are every day labouring to repair the defects

of construction and distribution, which the greatest number of our hospitals labour under, and to increase their salubrity; or, at least, to mitigate, as much as possible, the inevitable causes of insalubrity in places destined to the assemblage of a greater or less number of persons, and especially of sick persons. Some great advantages have already been, and more will be, obtained: the day, perhaps, is not far distant, when the different hospitals of Paris will present all the advantages of which these kind of establishments are susceptible. But the hospitals of London, at the present moment, leave little to be desired in that respect. Those which are of long standing, have possessed likewise, for a long time past, the advantages in question: because there, the buildings set apart for hospitals have never been applied to any other purpose, than that to which they are now applied. Hospitals have not been established in houses erected for other purposes. They were able, consequently, to provide for every thing in the construction of them. With regard to the number of sick for which each of them is intended, almost all of them are constructed of sufficiently large dimensions; there is no want of room. Their interior arrangement possesses all the conveniencies that can be wished to facilitate the service. The wards are not spacious, but they contain only a small number of patients in proportion to their extent. They are, in general, well supplied

with windows, but these are almost universally too low. A great degree of cleanliness is kept up. With all that, however, the interior of the wards does not present the imposing appearance of the most part of ours: that is, because the beds are too low, badly furnished, narrow, either without curtains or with very small ones, which, being placed at the head of each bed, serve only as a niggardly decoration. In our hospitals, on the contrary, the patients find a couch, at least, as good, and the greatest part of them better, than what they have left; and it is a pleasant thing to see wide beds, sufficiently high, well furnished, and surrounded with curtains, of which the least advantage is, to diminish the nakedness of the wards, but which are still more serviceable to the patients themselves, by securing them, to a certain degree, from the impression of cold during the severe weather; for procuring them, in the day-time, a certain degree of obscurity, which is favourable to the repose they may stand in need of; to conceal them as often, and with as much facility, as they can wish, from the sight of those nearest to them; and to keep off, as much as possible, the afflicting spectacle, so frequent in hospitals, of some unfortunate fellow-creature in the agonies of death.

The patients are generally only admitted into the London hospitals, on the recommendation of one of the subscribers to the establishment. This intro-

duction is not useless; and there is no exception to this mode of admission, but in favour of accidents, and serious hurts which require prompt assistance; and, in some hospitals, especially those which are in the neighbourhood of the most populous places of this immense city, of those quarters where great works are carrying on, which give rise to the greatest number of accidents, a particular ward is set apart for the reception of the unfortunate, whose hurts have placed them in a situation to be received without particular recommendation.

It would be much better, in London as well as other large towns, that the sick had only need to present themselves at a hospital in order to be received, their disease being first ascertained by persons to whom the care of examining them should be confided. I am aware that a system of this kind is not without its inconvenience; but what order of things is exempt from them? It was formerly the case in the hospitals of our capital: it is only within these twelve or fifteen years, that a central place has been established, to which all the patients, from every quarter of Paris, must repair, who wish to be received into the hospitals: their diseases are there ascertained, and each of them receives a ticket of admission, either for one of our special hospitals, if it be a child, or one affected with a disease for the treatment of which some of our hospitals are exclusively destined, or for one of the

other hospitals, if the age and nature of the complaint allow of their admission; and if it be desired by the patients, and the thing be possible, for that hospital nearest to their usual residence. It is not allowed to admit as casualties into our hospitals, any but persons dangerously hurt, or whose life is actually threatened by any other accident. By this institution of a central office, it was thought to prevent the abuses arising from the too easy admission of patients into the hospitals: it was more particularly wished to prevent the crowding of them, and to ensure the destination of each of the special hospitals. I have taken a pleasure in pointing out a great many of the happy changes which have been introduced into our hospitals within no great number of years, and to shew the advantages which they present, in many particulars, superior to the hospitals of London. Neither do I hesitate to assert, on comparing what is now doing amongst us, with what took place formerly, that like many other innovations that are wonderful in theory, but of which experience demonstrates the inconveniency, this institution of a central place, where all patients must present themselves for inspection, is bad, in whatever point of view it is considered; that it presents none of those advantages, in the hopes of which it was established; that it remedies very imperfectly the abuses it was intended to reform, and that it is the

source of a multitude of others, against which the principal physicians and surgeons of hospitals remonstrate, who are the most likely to observe them. Their voice, I hope, will be heard by those who preside over the general administration of our hospitals. These hospitals ought to be open without so many formalities, to the unfortunate, who hope to find there a solace for their calamities: too much cannot be done to exempt suffering mortals from preparatory steps, so little compatible, most commonly, with the state of privation in which they are found. It is in the hospitals themselves, and by regulations which ought to be rigidly enforced, that the abuses which might arise from such an indulgence ought to be guarded against.

There is in some of the hospitals of London, as I have already intimated, a particular ward for the wounded, properly so called, that is to say, for persons who have met with serious accidents; another for venereals, who are attended by the surgeons. Excepting these instances, the departments of medicine and surgery are here confounded: in the same wards are collected some patients claiming the succour of medicine, and others whose complaints are in the province of surgery. This circumstance is only witnessed in France in some hospitals of very small towns, where the small quantity of disposable space will not allow it to be done otherwise, and where beside, cases of surgery,

especially serious ones, such as could render important operations necessary, occur too seldom to render it of importance whether patients affected with surgical affections be united in the same ward, or not, with those labouring under internal diseases. But in the great hospitals, in those hospitals set apart for the daily practice of the higher operations of surgery, as well as that of medicine, there is a real inconvenience in not separating the diseases which are the object of each. The following is a statement of what both one and the other have to suffer from their union.

If we except the times, which are extremely rare, when a great number of wounds become complicated with a state of gangrene, or when the hospital sphacelus prevails amongst the wounded, is it not certain that surgical diseases cause less impurity of the air than internal ones? Is it not true that a great number of patients of the latter description, disengage impure effluvia in greater quantity than the miasmata arising from wounds and ulcers? The mortality amongst these patients is incomparably greater than amongst the wounded; and who does not perceive that the painful spectacle of dying persons, and of death, is capable of producing a melancholy influence on the state of those unfortunate persons who may be labouring under severe wounds, who have undergone serious operations, and whom it is of such importance to preserve from all

causes of moral impression? These same patients dangerously wounded, and still more, those who have undergone operations, require to enjoy perfect tranquillity; they wish to hear no kind of noise: it is more especially in the night that they hope for repose, in order to give themselves up to sleep, which should cause them to forget all the pain they have undergone. They cannot enjoy these advantages if surrounded by patients suffering under internal maladies. A great number of these do not enjoy during the night that quiet which they want themselves; it is in some the time marked out for the exacerbation of the symptoms of their disease. Thus, if you run through the wards of a large hospital in the night, in which the departments of medicine and surgery are separated, you will hear in the surgical wards scarcely any noise. A great many surgical diseases, it is true, produce watchfulness, but it is extremely rare that the patients in this state give themselves up to any expressions of pain. Quiet then generally reigns during the night in the surgical wards; the contrary takes place in the medical wards. How many internal maladies cause such suffering, that the patients cannot help uttering, almost continually, a plaintive sound? If it is not by complainings and groans that the silence of the night is interrupted, it will be so by the fits of coughing of the unfortunate phthisical patients, by the importunate loquacity, by acts still

more noisy of men in a state of delirium, &c. To this must be added, that in the medical wards, many of the patients require the same assiduous cares to be extended to them during the night as the day; which cannot be accomplished without noise.

Under these circumstances, then, the severely wounded, and those who have undergone operations, placed in the midst of persons labouring under all kinds of internal diseases, would be submitted to influences both physical and moral, hurtful to their situation; they would be obliged to suffer extreme insalubrity of the air, the almost continual sight of unfortunate wretches in the agonies of death; they would have to suffer the inconvenience of not being able always to enjoy during the night the quiet and tranquillity necessary for sleep.

Their presence, it must be allowed also, is some inconvenience to the patients with whom they are blended in one ward. In order to judge of this, observe what the surgical wards are during the day. At the hour of the dressings they are attended by a greater or less number of pupils, and a great number of painful operations must necessarily be performed at the beds of the patients. At every instant are liable to be brought in unfortunate persons who have met with some accident, and whom one cannot behold without feeling some painful emotion. A great number of surgical diseases, not producing any effect on the general health, those

who are affected with them like to get up during the day, and walk about; or if obliged to keep to the bed, it would be very difficult to prevent them from conversing together.

It may then be said, that the surgical wards in a large hospital are noisy during the day, too much so even for some of the patients who are placed there. Suppose for a moment, that these patients are in the midst of a crowd of others who require only medical cure, how extremely inconvenient to these would be the bustle inseparable from the service of surgery! I am persuaded that in hospitals where the two departments are not separated, in those of London for instance, the fever patients, and others confided to the care of the physician, dread greatly the moment of the day when the visit and dressings of the surgical patients take place.

This is sufficient to make the necessity of the separation of the two services of medicine and surgery in great hospitals be felt. This separation has long existed in those of Paris, and this is not one of the least advantages they present, when compared with the hospitals of the capital of England. Nevertheless the physicians and surgeons partake of our views in this respect; their ideas, their principles, do not differ from ours. They wish to see introduced amongst them this peculiarity of discipline, in the interior of their hospitals. But hither-

to, prejudices stronger than reason have rendered their wishes vain, and their attempts useless. It is not long since, that the physicians and surgeons of the London Hospital, one of the most recently established hospitals in London, had resolved to try every expedient in order to obtain this point, that in that fine establishment, the patients affected with internal complaints, and those whose situation required the aid of surgery, should be in separate wards, and perhaps that amelioration once introduced into one of the hospitals of London, would soon have extended to all the rest. Obstacles, however, superior to their efforts, obliged them to abandon their project.

But it would depend on the will of the physicians and surgeons attached to the London hospitals, to put an end to a defect equally prejudicial to the patients, and to the science which they furnish the means of promoting, which is this. The men placed at the head of the medical and surgical practice in our hospitals, are subjected to, or, at least, have subjected themselves to, daily visits. At London, on the contrary, it is only twice, or, at most, three times a week, in each hospital, that the patients are visited by the chief physicians or surgeons; not one of the London hospitals make a fortunate exception to this rule. Such a custom is attended with great inconvenience, especially as far as concerns the medical practice. It is of little use, we may say, that

in each hospital the principal physician has one, two, or several assistants, who, under the title of apothecaries, are entrusted at the same time with the preparation of the medicines, and with visiting every day the patients. Ought it not to be extremely prejudicial to these to be attended and treated alternately by two medical men, who have not, perhaps, imbibed the same doctrine, do not entertain the same practical views, or one of which is, perhaps, obliged to follow blindly the errors of the other? This custom is not less inimical to the interests of medicine. It is certain, that amongst internal diseases, there are a great many in which the different stages succeed to each other so slowly, that, in order to make an exact picture of them, it is not necessary to follow scrupulously the progress of each day, but at the same time, how many are there, whose rapid progress assumes each day, or even many times in the same day, a different physiognomy, and for the exact observation of which, the true physician ought only to have his own reports, and to see as little as possible with the eyes of others. Because, the cases of surgery are not subject to so many changes, as internal diseases, because they continue their progress in a more regular manner, the regulation which the hospital-surgeons of France have imposed upon themselves of visiting their patients every day, of presiding every day at a fixed hour, at the dressings of the wounded, ap-

pears perhaps superfluous. But surgery, like medicine, has its acute diseases, and there are, perhaps, amongst surgical affections, more than amongst those in the department of medicine, which require the most speedy and able assistance. And with scrupulous attention do the consequences of certain wounds require to be observed, as well as those of many operations. If I may judge by my own feelings and my own experience, a zealous surgeon, at the head of a large hospital, finds every day occasion to see something that he would not have seen the next day, and which he would be sorry not to have observed; he finds also every day occasion to do something or other, which he would not wish to have done by his subalterns.

Even the custom established in the London hospitals, of making the visit in the medical wards, and the dressings and operations in the department of surgery, in the middle of the day, at twelve, one, or two o'clock, is attended with inconveniencies. That, on the contrary, established among us, of performing the hospital service in the morning, seems to be better calculated for the interest of the patients. Consider those who are affected with internal maladies. At what time do those temporary exacerbations of the symptoms, so common in a great number of chronic affections, take place? It is almost always in the night. It is also in the night, and more constantly so, that nature effects

those crises of acute diseases, or that the different changes of condition, I would almost say, metamorphoses which so great a number of them have to undergo, take place. Is it not a great advantage in the practice of medicine, to observe the patients at the time nearest the period in which the paroxysms have taken place, those crises, those changes in the progress of diseases, at a time when these cannot be yet quite accomplished, at a time when the crises are not yet entirely terminated, or when the exacerbations of the symptoms of many diseases yet continue? It is more for the day than for the night, that the changes of medicine and diet are made proper for the different stages of the same disease. It appears, then, most convenient that the changes should be prescribed in the morning, since, in hospitals, and places intended for the collection of a number of persons labouring under different diseases, it is impossible to visit each of them at that precise time of day which would be most convenient with respect to the character of each disease.

With regard to surgical cases, such is the character of the greatest part of them, such is the nature of the attentions which those affected with them require, that the hour of the day in which these attentions are given, is a circumstance almost indifferent. It is customary to dress ulcers and suppurating wounds once in the twenty-four hours: it is

of little consequence whether these dressings, which the patients do not dread because they generally give them little or no pain, be applied in the morning, in the middle of the day, or in the evening. Of what consequence also is the hour of the day in which other dressings are applied, which likewise require to be renewed once in twenty-four hours, because topical applications are employed; the medical properties of which are weakened, or even almost entirely dissipated, in this space of time? The same may be said with still more reason, of certain dressings which are only to be renewed at still more distant intervals, because they consist in the application of external medicines whose action is slow, and which long retain the same properties, or of certain mechanical apparatus, such as the bandages and splints used in fractures, which ought to be touched as seldom as possible.

But these are not the only things which the practice of surgery comprehends: another essential part are, the operations, properly so called, bloody and painful operations. If they are a source of happiness, to whom surgery presents them as its last resource against the evils with which they are afflicted, because they expect to find a period to their miseries, because sometimes they put an instantaneous end to the severe sufferings inseparable from the diseases for which they are had recourse to, yet they are also a source of torment, inquietude, and

fresh sufferings. How few men, in fact, have courage enough to be calm and unmoved on the approach of the moment when an operation is about to be performed upon them. Beside, every operation is a cause of pain, and sometimes of the most excruciating kind; and, amongst the number of great surgical operations, there are some which expose the patients to the most serious accidents, and by which his existence is more immediately compromised, than by the evils to which it is intended to put a favourable period. Consequently, in the number of precautions to be taken for producing a favourable moral disposition in those who are about to undergo serious operations, it ought to be reckoned for something, to take care not to prolong uselessly the state of expectation, which is, at all times, painful in these operations. This care becomes the more necessary, when we have to deal with beings who are less courageous or more sensible, and who dread more, both the pain inseparable from most of our operations, and the consequences that may result from them. It is impossible, in our hospitals, to prevent the patient from knowing the day on which he is to undergo an operation: very frequently it is fixed by himself. Suppose the day to be arrived; the patient has passed the night in tranquillity; the dread of the operation has not prevented him giving himself up to repose: but, if this operation is not to be performed till the middle

of the day, whatever there is of cruelty in it, will be continually present to his imagination the moment he wakes. If, on the contrary, during the preceding night, the patient has been restless, agitated, if from too great weakness of mind he has given himself up to melancholy presentiments, does not humanity dictate that a speedy end should be put to this distressing state of mind?

In this respect, the custom of our hospitals of performing this service in the morning, is an advantage; and the English would do well to imitate us in it. Another reason which ought to induce us to prefer the morning for great operations, not only in hospitals, but also in private practice, is, that many of these operations are liable to primitive accidents: a serious hæmorrhage, or spasmodic affection, are what we have most reason to apprehend; if either of these take place, it is mostly within the first twenty-four hours, but seldom in the first hours immediately following the operation. Suppose, then, that it has been performed in the middle of the day, and that a consecutive hæmorrhage takes place, it is very probable that it will happen in the night; whilst, after those operations which have been performed in the morning, should a hæmorrhage follow, it almost always appears in the middle or near the end of the day. It is scarcely necessary to observe, that, under all circumstances, the night

is a less proper time than the day, for remedying such an accident.

It is in the hospitals that I have seen most of the practice of the London surgeons; it is there that I have collected most of the materials which are to serve for the exposition of surgery in England. I shall, however, separate this object from what remains to me to say concerning the hospitals of London. I can do this so much the better, as surgery does not differ essentially in or out of the hospitals; the great principles of the art are the same. It may nevertheless be said, that, being by necessity more simple, or rather less fertile, of resources in whatever does not concern operations, the surgery of hospitals shews itself, with respect to these last, more bold and enterprising. Although they are not, as is imagined and spread abroad by the ignorant vulgar, the theatres of experiments, yet we dare sometimes to try and to do in them what we should not undertake elsewhere; there also, certain cases of surgery occur, if not exclusively, at least, more frequently, than in private practice.

I shall then take into consideration, the present state of surgery in England, as a separate subject: but it is in speaking of the hospitals of London, that I must treat of the medical and surgical education, and particularly the latter, of this capital; for, although there are at London a College of Medicine

and a College of Surgery, in each of which, public courses are given, both of which colleges are independent of the hospitals; although there are also several private establishments, which depend neither on the hospitals nor yet on the colleges, and in which are professed anatomy, physiology, and the different parts of surgery, yet the hospitals are the places in London more particularly destined to the teaching of medicine and surgery; they are the principal sources of instruction both medical and surgical. I shall first, however, take a glance at these two.

Of the two colleges, I have only seen that of surgery. As an establishment for education, the College of Surgery of London is not to be compared either to our faculties of medicine as they at present exist, or even to what the College of Surgery of Paris was, at the period when this College and the ancient Faculty of Medicine formed two bodies of education distinct from one another. In the London College of Surgery they have only, in the space of a year, one course of Anatomy, one of Surgery, and another of Comparative Anatomy. It is a singular circumstance, that this last course is the most extensive of the three, and that to which they have attached the most importance, and give the greatest attention. Certainly, Comparative Anatomy and Physiology are a part of natural history, which ought to enter into a complete sys-

tem of medical education: they have been serviceable to the progress of human anatomy, and especially physiology, and they may still be so: and in our faculties of medicine and surgery, which are organized on the large scale, it would, perhaps, have been well to have instituted a particular course for this subject, rather than to leave to the professors of anatomy and physiology the care of making excursions upon the provinces of the comparative sciences, and placing them under the necessity of departing from their principal object. But that in the College of Surgery of London, comparative anatomy and physiology should occupy the first rank, that a course on this subject should be the principal one given there, is an essential defect in this institution. After what has been said, it will not appear astonishing to relate, that the Museum of Anatomy in the College of Surgery of London, which, in other respects, is very beautiful, extremely well arranged, very neatly kept up, and in which is to be found even a profusion, is less a museum of anatomy, such as one would expect to find in a school of surgery, than a kind of collection of natural history, or, at all events, of comparative anatomy. The preparations relating to this latter subject occupy, indeed, the greatest space; they are arranged according to the order of the functions, that is to say, there are grouped together the organs of each function belonging to all the classes of

animals, and this order, they pretend, existed in the museum of their college before M. Cuvier had adopted it for his researches, and his work on Comparative Anatomy. It is the same method to which Haller had been led for human anatomy, in his great work on physiology, almost involuntarily, and without attaching to it any importance: it is that which Sœmmering, and after him Bichat, introduced into their works; a good method in some respects, defective in others, when applied to human anatomy; but, applied to comparative anatomy, is the only plan truly great and philosophic, the only one consistent with the end proposed in the study of this part of natural history. This anatomical museum contains, as an appendix, a tolerably large collection of pathological anatomical preparations, and particularly in the department of surgery. This collection was formerly that of W. Hunter.

I was only able to take a hasty survey of this beautiful assemblage of anatomical preparations, properly so called, as well as of comparative and morbid anatomy: they appeared to me to have been carefully preserved. I must here take occasion to observe, that the English appear to possess, to a greater degree than we do, and to partake with the Germans, the taste for anatomical preparations. In London, the museum of the College of Surgeons is only more superb than several others which belong

to private professors of anatomy and surgery. The one which I regarded with the most interest, after that of the college, is one, which being begun by John Hunter, and augmented by the assiduity of M. M. Wilson and Charles Bell, forms at present a part of the establishment in which these two distinguished men teach anatomy and surgery. It is possible that this taste of the English for making and preserving anatomical preparations, took its rise from the difficulty which formerly existed in England, of procuring dead bodies for anatomical demonstration, and other purposes relating to this branch of medicine. So likewise the same difficulties gave occasion to the methods, very general at one time, of publishing anatomical works accompanied by plates and drawings, or rather of works essentially composed of anatomical plates: thence also originated, especially in several parts of Italy, the taste for anatomical preparations in wax: all of which are different means of supplying the defects of the natural subjects; resources indeed useful, though insufficient, against the obstacles which existed to anatomical pursuits. But if such has been the origin of the taste which has existed, and which still exists in England, for collections of natural anatomy, this taste has outlived the cause which gave rise to it: for at London, in fact, anatomical studies are almost as free as it is possible they can be; the facilities of following the practice of it are

not greater, or even altogether so great as they have been at Paris for so long a time, or even as they were a few years since, but are assuredly much greater than they are with us at present. At London the public authority does not interfere, or they do not choose to have it interfere, to do away what is good; to overturn a long established order of things: every one is interested to maintain it, and it will always subsist, because in London, for the different branches of medicine or surgery there professed, the public teaching is scarcely any thing, and the private teaching is every thing.

Of the different establishments destined to this latter purpose, some are not connected with the hospitals, others, which are the principal, exist in the hospitals themselves: it is within their walls, and by the principal physicians and surgeons of them, that are given the chief private courses. So, as I have before said, the most considerable hospitals in London are so many particular schools, altogether free and independent of each other, rivalling each other in zeal and activity. One very important thing, however, is wanting in all these private schools, that is, the clinical courses. In the London hospitals there are neither internal nor surgical clinical courses regularly organized.

In order to keep on consistently with the style in which I have begun, and which I intend to pursue in this Narrative of my Journey to London, I ought

to draw the comparison of what is doing in the capital of England, with the present state of medical education in France, and particularly at Paris; but powerful reasons induce me to preserve silence in this respect. Not that I am afraid of being drawn, in spite of myself, to acknowledge the superiority of our neighbours. I am far from granting it to them. The existence of our *facultïes* which enjoy a high protection; their beautiful and imposing organization; the happy impulse which this organization has even given to the public teaching of medicine and surgery, and the sentiment which it has introduced, impress upon this education in France, a stamp of greatness which it does not present in the capital of England. It is a circumstance of which we ought to be proud.

I might add, that whatever has been done in France to discourage those men, who having a just idea of their own strength, seem to open to themselves a brilliant career, by following at first the plan of private teaching, and to destroy this system, it is still at Paris, as it always has been, a not less fruitful source of instruction than the public teaching. But to avoid betraying the truth, or to tell the whole of it, would open a way to criticism; and in discovering the evil, how can I avoid tracing it to its source? How can I avoid saying that a culpable relaxation has been introduced into several parts of our public medical instruction?

that, by a system of innovation, one of the worst concerted, the ruin of private instruction has been projected; that strong attempts have already been made upon it; that a part of its liberty and independence have been destroyed, and consequently of that which rendered it so fertile a source of zeal and emulation, both for those who practised it, and for our young students: that, by measures from which it would have been so easy to have turned the authority that had recourse to them, Paris will be rendered in a short time—but what am I saying? Paris is already, of all the towns in France where medicine is taught, that in which anatomy can be the least easily studied and cultivated: that by this means we are about to lose that superiority in education which, before our political troubles, attracted to France foreigners curious of acquiring, in a short time, an exact knowledge of the different branches of medicine, or of perfecting what they had already acquired?

Thus, then, the fear of wounding some *amour propres*, a sentiment of national pride, and the fear of appearing to be influenced by other motives than the interest and love of science, prevent me from explaining myself here freely, and deter me from the resolution I had taken of examining in detail, on the points in which the system, and what I would willingly call the forms, of education in medicine and surgery in Paris, deserve the preference

to the system and forms of the same kind of education in London: and on the other hand, in what respects we might envy some things in the English. I am obliged in spite of myself to leave an important blank in this part of my work.

Shall I describe at least, after what methods, in what style, anatomy, physiology, and the different branches of surgery are professed in London; for it must not be forgotten, that London is principally a school of surgery, and that the teaching of medicine is reduced to a mere trifle? Here again I am at a stand. In order to form tolerably exact notions, it would be necessary to have assisted at some of the lectures, either public or private. But it happened, unluckily for me, I was in London in the month of August, which was the time of the suspension of all the courses. And beside, had I been there at a more fortunate season, perhaps, although I am conversant enough with the reading of the English language, I might not have been able to have profited so much as I should have wished, by the lectures given in this language; in the same manner, without a perfect knowledge of the French language, and a frequent habit of employing it in conversation, a foreigner can scarcely flatter himself that he has seized the spirit and details of our lectures on any subject whatever, of medicine or surgery. The only thing of importance on which I have been able to gain information is, that in

London all the courses are made with a great degree of conciseness, and in a very abridged manner; ours are in general longer and more detailed; for which reason the English accuse us of prolixity. If it is not possible to avoid one or other extreme, that of which they accuse us is the one attended with the least inconvenience. But perhaps these two modes of teaching, which appear both equally faulty, are each adapted to the turn of mind of the men for whose instruction they are practised. A serious and reflecting character, given to meditation, distinguishes eminently the English nation, and is particularly observable in what developes itself early. The Englishman, while still young, is remarkable for a certain maturity of reason and judgment, which, when we are about to teach him any science whatever, allows us to reckon as much upon the operations of his own thoughts, as upon the simple exercise of his memory. Without being less qualified for labours of the mind, for the cultivation of sciences, and conceptions of genius, the French youth is more impetuous, more distracted; his reason is more slow in coming to maturity, and when he sets about the study of the sciences, it is necessary, for some time at least, that his memory only should be cultivated, and that few things be left to his meditations. There is, perhaps, also in us Frenchmen, a necessity of imparting and communicating to others, in all its details, the informa-

tion we have acquired. What Seneca said of himself, that he would consent to know nothing, if his knowledge was to be for himself alone, if he were forbidden to communicate it to others, is the expression of one of the traits of our character.

PART THE SECOND.

CHIRURGICAL DOCTRINE AND PRACTICE OF THE ENGLISH.

IN order to arrange in the most convenient method this second part of my work, and to form the whole as methodically as the nature of the subject will allow, I should first consider one thing; namely, the manner of dressing, and the general mode of operating by the English surgeons.

A number of surgical diseases, beside wounds and ulcers, require for their treatment nothing but the application of topical remedies, which application, occasionally renewed, constitutes what in surgery is called a dressing. But it is more especially wounds and ulcers of all kinds that are *dressed*, either every day, or at longer intervals, whether for the purpose of changing the medical applications, or only with a view to protect them from the contact of the air, the impression of

cold, or other hurtful qualities of the atmosphere; or, in a word, from the injury of external bodies; and thus the dressings may be considered simply as defensive; for, in wounds especially, and in those even in which a greater or less degree of suppuration is to take place, and are intended to heal only by the slow process of cicatrization, nature would be of herself sufficient for the regular succession of the different states which produce this kind of cure.

For patients of every description, but more particularly for wounds and ulcers, the method of dressing used in England, or at least in the London hospitals, is extremely simple. The English surgery is not more *poly-pharmaceutic* than the French surgery: it seems, however, that English medicine has not, so much as our own, divested itself of that character. At the same time, the simple manner of dressing wounds and ulcers adopted by the London surgeons, does not depend entirely on the circumstance of their having carried to as great a pitch as ourselves, the rejection of ointments and all compound topics, which for so long a period were employed, with a profusion as ridiculous as vain: it arises partly also from the method of treating these solutions of continuity, to which they have given the preference. For instance, it is already known, and I shall point out elsewhere, more particularly, the singular predilection of the English surgeons in favour of the immediate union of wounds, even

of the most extensive ones: they unite by the first intention all those which do not present an absolute impossibility to the use of this method. It may be clearly seen that this renders useless long and complicated dressings, whilst at the same time, when successful, it procures a more speedy cure: thus a double advantage is hoped for. The English surgeons have thought to extend it to ulcers, which, as they are kept up by a local action, require principally a local treatment. We cannot in fact, by any mode of proceeding, completely unite, and bring into immediate contact, the edges of ulcers if they be of any extent: but it may be attempted to diminish the interval which separates them by employing strips of adhesive plaster: if the ulcer be upon a part which admits of being circularly embraced, this part may even be surrounded with adhesive strips, the extremities of which cross the edges of the solution of continuity, and draws them towards one another. This is precisely the method of treating ulcers, which is most generally followed in England. I shall not at present set forth its advantages or its inconveniences, nor say in what point it deserves to be preferred to our own. I only point it out here, as being one of the sources of the simplicity of the dressings in English surgery. The result is evident.

The English surgeons are almost absolutely in want of the different objects which compose the

materiel of our dressings, or, if not absolutely in want of them, have more difficulty in procuring them than we have. How can they have abundance of lint in a country where there is so small a consumption of linen thread? Nevertheless, our *charpie*, properly prepared, is, without any doubt, the extraneous substance the least inimical to wounds; it is with it, that it is most convenient to cover and defend from external injuries all wounds, whether recent, or of long standing, and in a state of suppuration, so that their immediate union cannot be effected. This charpie makes but a slight impression on the surface of wounds; and as it is most commonly applied softly in a lanuginous state, it becomes easily penetrated with the serosity which oozes from the surface of a wound that is recent, or with the matter furnished by a wound when suppurating. They use instead of it, in England, pieces of linen prepared for this purpose, almost resembling the texture of cotton, which we call in French *futaine:* the side of it, which is furnished with a sort of down, they apply in contact with the surface of wounds. This lint, which is less convenient than charpie, properly so called, for dry dressings, is, on the contrary, altogether as convenient as the other for forming plasters of ointments. The English surgeons also employ it for this purpose; but they spread their cataplasms on pledgets of tow. Tow is also employed by them instead of

our charpie, for filling up the hollow of deep wounds, previously covered with a piece of their lint.

The same reason which hinders them from employing our charpie, may be assigned also for compresses scarcely entering into an article of their dressings. However, the case is not the same with regard to compresses as to charpie; this last can only be made of linen, properly so called; on the contrary, cotton cloth, which is so common, and at so low a price in England, would serve as well for compresses as linen. Our linen bandages are exchanged for bandages of flannel, and these are scarcely used by English surgeons but for the purpose of compression. At least, they are far from making that extensive use of them which we do of our linen bandages in the application of dressings, whether simply retentive, or defensive; they are reserved for cases of absolute necessity. Whenever strips of adhesive plaster will suffice for retaining on a wound or ulcer, the lint, or other substance immediately applied to their surface, the English surgeons employ no other retentive means; and, as on the other hand, they effect the immediate union of almost all their wounds; for which purpose, adhesive strips are almost constantly employed, either alone or in conjunction with the suture, it is difficult to form an idea of the quantity of adhesive plaster they consume. I have observed, that it is prepared with the greatest care.

These are the only essential peculiarities to be noticed as to the *materiel* of the dressings in English surgery. In the dressings themselves, the English are more careful than we are of cleaning completely the wounds and ulcers, of removing, either by injections or repeated washings, which are beside extremely simple, all the produce of the suppuration, and also to clean perfectly the surrounding parts, and free them from all the impurities which may have covered them in the interval of the dressings. To be exact, I should say, that they take more pains than we do in regard to cleanliness in dressing wounds and ulcers. In thus expressing myself, I would have it understood, that this attention to the sponging and washing the surface of wounds and ulcers, and of cleaning the neighbouring parts, which the English surgeons carry to minuteness, is not of so great utility as may appear at first sight. Our method of dressing wounds and ulcers, or rather, the nature of the articles we employ for dressing, renders it less necessary. In fact, the charpie with which we generally cover parts in a state of suppuration, absorbs the greatest part of the pus, and leave but a very small quantity even on the surface of the ulcers which have produced it. Our defensive dressings, by subjecting them to some slight modifications, are, in a great many cases, the means, as simple as efficacious, of preventing the stagnation and accumulation of matter in the si-

nuses, and from knowing better, at present, how to direct the expulsive compression in the treatment of large abscesses, deep wounds, and fistulous ulcers, as well as from the more frequent use of counter openings for giving an easy passage to the matter, we make much less use now of diluting, detersive, or stimulant injections. It is with charpie that we absorb the superabundant pus which remains on the surface of a wound after removing the dressings; and the surrounding parts are wiped with linen. Thus we are contented to clean gently the surface of wounds and ulcers, and only wipe the surrounding parts, because we have always an abundance of charpie and linen: it is possible, that the want of these two articles, or the necessity of using them with economy, led the English surgeons to the practice of washing their wounds.

What shall I now say concerning their general manner of operating? I wish it to be observed, that I am not now about to examine in what respect their methods and proceedings differ from ours, in each of the principal operations of surgery, in particular. By these words, *manner of operating*, which, I am aware, ill express what I would convey, I intend not only to point out all that concerns the execution itself of any particular operation, but also the conduct of the surgeon in every thing connected with an operation; in whatever relates to it both before and after the moment of its execution; in

whatever should precede or follow it; beginning from the moment when its necessity becomes ascertained; or rather, comprising even the judgment on which the indication of it is established.

With respect to this last article, which discovers the excellence of a surgeon much more than expertness, so easy to acquire, in the practice itself of operations, I had heard the English practitioners accused of deciding rather lightly on operations, and shewing little confidence in the other resources of the art, and in those of nature. This reproach is not well founded, at least, I can affirm that I saw nothing during my stay in London, which could furnish a pretext for it: of the very great number of operations which I saw performed by different surgeons, there was not one that was not perfectly indicated. If, then, I may judge from what I have been able to observe, the English are not, in this respect, more forward than ourselves: it might rather be said, that they are bolder, more enterprising, greater admirers of novelty and extraordinary attempts, than we are. This would be almost as much as to say, that they possessed the true surgical genius in a higher degree than ourselves, if a greater number of the discoveries and inventions of the English surgery had received the sanction of time and experience. But how many of these inventions might be quoted, which, being more extraordinary than really useful, have contributed nothing to the

improvement of the art, and are forgotten even by the surgeons of the nation which gave rise to them: it is in France that they have been most rigorously tried, not because they came from abroad, but because, in the cultivation of the arts and sciences, we know how to preserve ourselves from enthusiasm, and be on our guard against extravagant inventions, false systems, and erroneous doctrine.

When once an operation has been indicated, and the patient has taken the resolution to submit to it, our constant usage is, to prepare him a few days, or even a longer time before-hand; at one time only by a low regimen, more or less severe, at other times, by generous remedies adapted to his existing condition, to the nature of the operation that is to be performed, and of the symptoms most to be dreaded from it; the end of which preparations is, to remove the predispositions which might exist to the production of these symptoms, and to put the patient into the circumstances most favourable to the success of the operation. But it must be understood, that this care is taken only for such operations which admit of some delay, and of these, such only as are of a serious character. The English surgeons, on the contrary, attach very little importance to these preparations, and abstain from it in a great number of cases in which we should have recourse to it.

There is one particular in which the French sur-

geons are seldom deficient, in respect to patients who enter our hospitals with the design of undergoing some serious operation, that is, when the operation is not urgent, and that even when the patients do not require any particular preparation, not to operate upon them till several days after their entrance into the hospital. We wish to render them familiar with these asylums of misfortune, and to habituate them to the air they have to breathe there, that they may become (if I may use the expression) seasoned, *acclimatès*. This precaution is commonly neglected in the London hospitals. It may be remembered, that the surgeons as well as the physicians, make their visits only twice in the week, one of those days in every week is set apart also by the surgeons for operations: it is on that day that all those operations are performed, the time for which can be regulated by the will of the surgeon; and very frequently they are performed upon patients who only entered the hospital the evening before, or two days at most. I am aware, that some reasons may be alleged in favour of this custom; and something may also be said against that of the greatest number of French surgeons, of allowing a longer time to elapse between the admission of a patient into the hospital, and performing the operation upon him, when the case is not urgent: so it may likewise be denied that any advantage is derived from submitting persons to any particular preparation,

who are about to undergo serious operations, and even some inconveniencies may be found to attend these preparations. This would be embracing and defending the doctrine of Pouteau. But Pouteau, in this doctrine, as in many of his ideas upon other surgical matters, has discovered more imagination than judgment, and a brilliant mind, fertile in paradoxes, rather than capable of profiting by the results of experience.

As to the execution itself of each operation, and their genius in it, or as to what may be called, the manner itself of operating in general, that of the greatest part of English surgeons, at least, of those which I have seen, differs likewise from our own, in some respects. Before pointing out the principal traits in either, I ought to observe, that there exists among the English surgeons, as amongst us, a manner of doing things not alike in all, but common to the majority; so have I found amongst the English surgeons, something like the French manner of operating; and, in like manner, an Englishman might observe, that the manner of some of our surgeons resembled in some measure, that of the English.

In France, we take care never to allow the patient to be a spectator of the preparations for his operation. We hasten, as much as possible, the immediate preparatives, so as not to prolong uselessly the inquietude and agitation of mind produced by the approach of an operation, sometimes even

of the slightest. These precautions are neglected by the English surgeons, at least, by the greatest part of those whom I have seen operate. They even neglect them in private practice, where more timid people are generally to be dealt with than in the hospitals, who are more easily moved, and whose extreme susceptibility it is so important to controul. I saw in London, in the very room of the patient, and consequently before his eyes, that the table, with all the necessary instruments, was disposed for the operation of lithotomy, and this by one of those men who now hold the sceptre of surgery, in an operation at which I was invited to assist.

A French surgeon, in an operation of this nature, does not disdain to share with his assistants the task of placing the patient in the position proper for such an operation. If it be an amputation, or any other operation, upon a limb, for which it is necessary to suspend the circulation, whether by means of a cushion, compress, or tourniquet, he is never seen to confide to an assistant the care of the compression of the great arteries, till he has made the application himself. Or, suppose an operation just performed, which requires the application of any kind of bandage or dressing, it is we ourselves who undertake the care of applying this dressing; and for this, as well as for other things, still less important our cares and solicitude extend beyond the moment when the operation is finished. For these

things, and for others, both accessory and secondary in operations, and which cannot be too well or too expeditiously executed, I have observed almost all the English surgeons refer to their assistants, their subalterns.

In the course of the operation itself, we always shew a desire not to prolong the sufferings of the patient: we endeavour to spend no more time about the operation than is strictly necessary for its execution. I wish it to be understood that in this respect, more, perhaps, than in any other, there is a great difference amongst different surgeons who are equally exercised, and that every one forms to himself a peculiar method, so that it is hardly possible to lay hold of some traits common to a great many. It may nevertheless be said, that in general we do every thing in our operations, in order to arrive speedily at the end; we proceed with all the celerity consistent with the peculiar character of each operation, and the peculiar circumstances so frequently unexpected, which the same operation may present in different instances. Shall I add, that preserving the *sang-froid* and self-possession, without which there can be no able operator, we are capable of using towards the unfortunate patient only words of consolation, whether it be necessary to excite him to suffer the complaints and cries to escape, which he is making an effort to retain, or to excite his courage, and to induce him to moderate

his expressions of pain? No, that would be to suppose that the contrary could exist, and that there are men capable of adding to the cruelty of our profession, and to the terror it inspires, by hardness of manners, and that could hold towards the unfortunate patient, while under a painful operation, language different to that of a compassionate heart. Perhaps I should likewise give room to think that the English surgeons have given me occasion to form of them an unfavorable opinion in this respect, which is not the case; and that I was casting upon them, indirectly, a reproach, which they certainly do not deserve. If there is any thing remarkable in their manner, it is an excess of coolness; it is towards the unfortunate patient, who wants consolation, an absolute silence; a coldness which in one of us would be taken for a hardness of heart or of character. To this trait there is joined another, which is perhaps only a consequence of it: it is the extreme slowness with which most English surgeons proceed to an operation. This manner does not belong absolutely to the whole of them, but is remarkable in the majority; and especially amongst some whose talents cannot be called in doubt, this manner is carried to the highest degree. The evening before I left London, I went to see performed in one of the hospitals, a circular amputation of the leg. If I had judged only by the appearance of the wound, without having assisted at the operation

itself, I should have extolled highly the surgeon who performed it. The section of the skin was perfectly regular; there was as much skin preserved as was necessary for the union of the edges of the stump, all the muscles of the limb were not less nicely divided, and of the posterior part projected beyond the remaining portions of the tibia and fibula, as much as it was possible for them to do in the circular amputation of the leg. The two bones had been sawed off in a perfectly transverse line, and the division of them presented not the least inequality: in a word, the amputation in question could only be the work of an experienced surgeon. But I had been witness to the operation, and nearly twenty minutes had been employed in only the separation of the limb; yet nothing had impeded the execution, and the surgeon might have made the different manœuvres succeed one another rapidly. It is thrice, or indeed four times the time strictly necessary for finishing equally well this part of the amputation of a limb.

These are the most remarkable traits of the manner of operating of the English surgeons and of our own. Differing as they do from one another, it is not possible that they can both be equally good. I leave it to be considered, whether the advantage be on our side, or on theirs.

At all events, I have said enough on the peculiarities of the English surgery, and their mode of

dressings and operations considered in a general way: it is time to describe the present state of it with respect to each of the principal objects which comprise the theory and practice of the art. I shall begin by the diseases nearly common to all parts of the body, and such operations as are performed indiscriminately upon all these parts.

Under this head are to considered wounds: they hold, indeed, the first rank on account of their frequency. Independent of their proper character, wounds, by which I understand all recent solutions of continuity, are remarkable in this, that they as often succeed to surgical operations, or indeed oftener than to accidents. One thing not less interesting to be observed, is, that in our operations, we imitate, if it can be so expressed, almost all kinds of accidental wounds: at one time they are simple punctures, perforations, similar to those inflicted by sharp-pointed instruments; at other times cuts of greater or less extent, more or less deep, with or without flaps; at other times again, wounds with loss of substance: contused wounds only, we never make designedly, though sometimes wounds by laceration. It must however be remarked, that the wounds succeeding to operations, excepting the very few which may be made by tearing away, are always cleaner, and more regular than those depending on the accidental action of external bodies. We produce even wounds complicated with a dele-

terious principle; such is the character presented by the wounds we make for the insertion or inoculation of certain *virus*. Lastly, we never designedly make gun-shot wounds; but when in certain surgical operations we apply the actual cautery on denuded bones, or on soft parts which have just been divided, the wounds resulting from it have this analogy with gun-shot wounds, that like them they are complicated with the presence of an eschar, more or less extensive in surface, and more or less considerable in thickness, that are not capable of uniting by the first intention, that a considerable inflammation must necessarily develope itself in the neighbouring parts, and that these wounds become the seat of a copious suppuration.

Thus, then, the wounds resulting from our operations are capable of exhibiting all the forms, and almost all the circumstances of accidental wounds. And what is the difference between the wounds from either cause, with regard to the nature of the parts of our organization, the natural state of which they change? Scarcely any. Do we not in our operations, especially interest those organs which exist in almost every part of the body, and which in anatomy are named tissues, or systems of organs? One single wound, that which results from the amputation of a limb, exhibits almost the whole of them divided: the skin, the cellular texture, the aponeuroses, muscles, tendons, blood vessels, both arterial

and venous, lymphatic vessels, and nerves; then again the articular parts, that is to say the ligaments, synovial membranes, and cartilages, if the amputation has been performed on a joint: or the periosteum, the osseous substance, and the medullary organ, if the amputation has been made in the continuity of a limb. The same parts are interested, though in less number, in each of the bloody operations of surgery: it may even be observed, that some of these operations are such, that it is particularly intended to act upon one of these organs in particular. And with respect to the special organs, that is to say, those which occupy some particular part of the body exclusively, and to some of which are confided the most important functions of life, how few of these, too, do we respect? How few are there which, as they are accessible to wounded bodies, may not, and ought not to be attempted by our instruments in some of the operations of practical surgery? This is particularly observable in the abdominal organs.

The consequence of what has been said, I imagine, may be foreseen, and the end proposed even, by this comparison of accidental wounds, and those resulting from surgical operations. Being the same in their nature, although differing in the manner of their production, the wounds of either origin ought to present the same curative indications: and in fact, the cure of both is submitted to nearly the same rules. There

is, however, something to be observed on this head. Accidental wounds present a greater variety than those which succeed to operations: each of these last is more constantly the same, because each of the principal operations of surgery is subject to rules from which it is scarcely possible to depart; or, because, in those operations which are not submitted to one single mode of execution, it depends on the surgeon to give to the wound resulting from such an operation, one form in preference to another, and that form best adapted to the mode of treatment he has previously resolved to follow. From these things, it may be conceived, that, in the wounds resulting from operations, the rules of treatment may be established on more positive data, and traced with greater precision than in accidental wounds. Let us suppose, in two different individuals, two wounds occupying the same part of the body, of the same dimensions; exhibiting nearly the same appearance, but one of them resulting from accidental injury, and the other succeeding to a methodical operation; it is easier in the latter case than in the former, to determine on the line of conduct to be pursued, to make a decided choice between the different methods of treating recent wounds, and for determining, for instance, whether it be better to attempt an immediate union by the first intention, or to abandon it to the slow process of cicatrization.

This being the case, I purpose more especially to

consider the doctrine and practice of the English surgeons, in the treatment of wounds succeeding to operations, and to some of these more particularly: I shall, moreover, dwell upon one principal trait, which is, their predilection for immediate union of these wounds, even of the most extensive. It will certainly not be expected that I should undertake to examine their practice, and compare it with our own, in whatever concerns the treatment of wounds; such a subject would lead me far beyond the limits I have prescribed to myself; for the treatment of wounds embraces vast details, and its explication forms undoubtedly the most extensive subject of surgery. Beside, I have resolved to speak of the present state of surgery in England, rather from what I have been able to observe, than from what might be furnished by meditation on their works, even the best works published by the surgeons of that nation; and by undertaking, in what relates to wounds, more than I purposed to do, I shall be too frequently obliged to draw from this latter source.

The method of uniting wounds by the first intention, has been known and practised ever since the infancy of the art; but it was far from being formerly so generally employed, even in England, as it is at present. John Hunter and Benjamin Bell, by applying it in a great number of cases in which it was thought to be inadmissible, have, in a singular manner, fortified the prejudices of English surgeons,

already very great in favour of this method; and, since this time, this predilection has become as great and as general as it can possibly be. It is one of the most remarkable peculiarities, one of the most prominent features, in the surgical practice of the English. Is it only the conviction of the English practitioners of the advantage of this method, that makes it so generally adopted? Such an unanimity in the manner of thinking and acting, with respect to one of those things, which, by their nature, tend to a divergency of opinions, must have some particular cause. Perhaps it may depend, in a great measure, on the circumstance of the English surgeons not having, like us, a profusion of those things necessary for the daily dressing of great wounds in a state of suppuration. If I am not mistaken, they are simple and economical by necessity.

Whether this conjecture be right or not, and to confine myself to the fact only, the method of uniting wounds by the first intention, great wounds, particularly those succeeding to operations, is then much more followed in England than in France. We do not employ it so often as we could; it may, perhaps, be said, that we use it with too severe an economy; but it is more certain, that the English surgeons are prodigal of it. For them, it is scarcely ever counter-indicated; they never give it up till it is rendered impracticable only by the too considerable extent of a wound, and the impossibility of

bringing together its edges. Without doubt, this method of treating wounds, when it is practicable, is the source of great advantages; by means of it, a very extensive, and sometimes very deep wound, is converted into a wound of a straight line; all the divided parts are brought into contact with one another; irritation from extraneous bodies is avoided; the dressings which succeed until the entire consolidation of these parts, are as simple and free from pain, as they might be complicated and fatiguing to the patient, when a wound of some extent has been dressed in such a manner, that a more or less copious suppuration is established, and it only heals slowly by cicatrization: for this reason even, that in a wound which has been united by the first intention, the consecutive inflammation is less considerable, if it is not possible to prevent altogether the suppuration, it is not copious; the local and general actions depending on inflammation, on the process preparatory to suppuration, or on suppuration itself, ought to be less severe, and, in fact, are so. The danger of a wound is, then, to a certain point, diminished, by uniting it by the first intention; and what is still less to be doubted, it heals more speedily; and its cure leaves behind, traces more regular and less deformed, than if a cicatrix had been allowed to form, and had formed slowly from the circumference to the centre.

But there is nothing so good of itself but it has

its disadvantages, or which may not be carried to excess. This is particularly true with regard to this immediate union of wounds. There are less inconveniencies from not employing it in cases where it might very well apply, than from making it the almost exclusive method of treating wounds. In following one method, we simply deprive ourselves of some advantages; the other, on the contrary, exposes us to risks more or less considerable. I maintain that it is an abuse of the immediate union, to employ it indiscriminately in all cases where it is practicable. It is evidently counter-indicated in a great many wounds, and even in wounds succeeding to operations; or rather, amongst those wounds, which, notwithstanding from the manner in which they have been made, and from the care which may be taken to give them one form in preference to another, are much better adapted to the immediate union, than those which are accidental; amongst these wounds, I say, there are some, and a tolerably great number, for which we must renounce this method of treatment, because its advantages are not sufficiently assured; because it may be the source of some inconveniencies. A few cases particularly will serve to demonstrate, that in regard to this immediate union of wounds, our practice is more scientific than that of the English surgeons. I shall choose them amongst those which occur daily.

There are few operations in surgery more fre-

quently practised than castration, or the removal of one of the testicles. As far as the state of the integuments will permit, it is done by extirpation simply; that is to say, by only a longitudinal incision made along the skin which covers the tumor, from the ring to the most depending part of the scrotum: it not very frequently happens, that the extraordinary bulk of the tumor, or some other circumstance of the disease, such as a state of ulceration of the integuments of the scrotum, puts us under the necessity of removing together with the tumor, a portion of these teguments, and thus to make a wound with loss of substance. In either case, we dress the wound, at first, by filling it with charpie: suppuration takes place, and we allow this wound to heal by the slow approximation of its edges. The English surgeons, on the contrary, do not hesitate to have recourse here to immediate union.

It does not appear, at first sight, what should hinder us from following this practice; it appears to be so much the more applicable here, because we have to deal with a very regular wound, and almost always without loss of substance: but this is what we learn from experience on this subject. As, from the ordinary method of performing castration, the teguments of the scrotum are preserved, there results, from the operation, a tolerably deep wound, the two halves of which can, with very great diffi-

culty, be brought into immediate contact in all points of their extent: the edges more particularly, which are very relaxed and without support, yield with great difficulty to an exact coaptation, by means of adhesive plasters. The difficulties on this score would, perhaps, be removed, by practising, in all cases, the operation by amputation, that is to say, by making always a loss of substance of the skin of the scrotum; which would neither render the operation more difficult or more painful, or more doubtful of success: it would be necessary also, for the union itself, to substitute for the adhesive plasters a few points of simple suture. This is precisely what the English surgeons think ought to be done; it is, at least, what I have witnessed during my stay at London, by one of those whose skill and knowledge I have hitherto most extolled, and it was in a case where the sarcocele had acquired no extraordinary bulk. It would have been sufficient to have made a longitudinal incision in the scrotum, if the immediate union of the wound had not been resolved upon: the operator, on the contrary, removed a great part of the teguments which covered the tumor, and afterwards united the wound by suture. Whether, in this particular case, the thread of the sutures were drawn too tight, or that, in general, a suture made upon the scrotum, and for a wound of any extent, such as that succeeding to castration, produces a more violent irritation than in other

places, on account of the exquisite sensibility of the parts, this union was not successful; there came on a considerable inflammatory swelling, the edges of the wound were cut through in several places by the ligatures, and the cure of this wound must necessarily have been protracted to a longer time, than if immediate union had not been attempted.

In the operation for sarcocele, a number of small vessels, which cannot be included in a ligature, have been divided in the midst of the cellular texture of the scrotum; but little blood escapes, whilst it filters with great facility into the loose cellular texture, which is almost entirely destitute of fat. This hæmorrhage, and the formation of a kind of hæmatocele, can only be prevented by softly plugging up the interior of the wound, and supporting the dressings by a bandage slightly compressive. But such a precaution is incompatible with immediate union of the wound.

With the risk of seeing appear in some cases, the accident which I have just mentioned, and which can never be fatal, we might, and we ought, even to try the immediate union of the wound succeeding to the operation for sarcocele, if there was ground to hope for a more speedy cure. But this wound never heals till after the same lapse of time, whether the immediate union be made or not. Experience is decisive on that point. Several times, having castrated for sarcoceles of a small size, and on young

subjects in which, the skin of the scrotum enjoying all its irritability, the wound closed quickly, and became greatly diminished in extent; I have profited by these favourable circumstances, by placing the edges in contact, and uniting them by the first intention. I have been fortunate enough to have a hæmorrhage very seldom baffle my intentions; it has appeared to me, that the inflammatory swelling of the scrotum was somewhat less considerable than when the wound has not been united; notwithstanding, I have never seen this wound heal without suppuration; yet it is not from the great diversity of structure in the divided parts, since this wound is confined to the skin and cellular texture of the scrotum: it is rather from the very great disposition to suppuration in the cellular texture, doubtless on account of its laxness, and perhaps from the considerable number of vessels and nerves with which it is penetrated.

Thus, then, we are not advocates for the immediate union of the wound after the operation for sarcocele; because, unless, in all cases, a tolerably extensive part of the teguments of the scrotum be removed with the tumor, and the suture afterwards employed as the means of union, it is difficult to establish between the lips of the wound, an exact co-aptation; because, in this part more than elsewhere, this union is liable to be accompanied by a hæmorrhage, which, if it comes on, gives rise to an

hæmatocele more or less considerable; because, in fine, experience proves, that nature requires nearly as long a space of time to heal the wound when immediately united, as when no union has taken place. Whatever advantages may attend this union under these circumstances, they are not worth purchasing at the price of a considerable difficulty in the application of the first dressings, and the fear of a consecutive hæmorrhage.

The English surgeons, in all cases, unite the wound resulting from the operation for aneurism. This is another abuse that may be made, and that they do make, of immediate union. It may be supposed, that this is not meant of the operation for aneurism by opening the sac: this operation has every day fewer advocates: in a short time, surgeons will all be agreed as to the very small number of cases, in which it may be preferred to the method of Hunter, without its ever being absolutely necessary; and supposing that it has been put in practice, the indispensable necessity of leaving this very extensive and deep wound to suppurate, cannot be, even for the English surgeons, an object of reasonable doubt. We refer only to the method of Hunter, and also to the operation by which, an artery recently opened, has been tied in the very place of the wound. There results from the operation in these two principal cases, a regular wound without loss of substance, a wound which is neither very

extensive nor very deep, but is complicated with the presence of extraneous bodies; the threads which have served for the ligature of the artery. If such a wound be united, with the view of obtaining a speedy cure, it will be necessary to apply no more ligatures than what are absolutely required to intercept the passage of the blood: the application of supernumerary ligatures for the prevention of hæmorrhage, should it afterwards come on, is incompatible with the immediate union of the wound; at least, it would be, in the highest degree (*souverainement*), ridiculous to combine these two things. But to renounce the supernumerary ligatures, or the use of any other means employed before-hand, for the purpose of remedying consecutive hæmorrhage, is to deprive ourselves of the most simple remedy, in case such accident should occur: it is sacrificing an important resource to the very poor advantage of a speedy cure: it is compromising the success of the operation.

To unite a wound after tying up an artery, is, at most, but admissible, without being extremely convenient, when the artery is not very considerable, and there is not so much to fear from consecutive hæmorrhage. I made, a few months since, a ligature upon the brachial artery above the tumor, upon a little girl of seven or eight years old, for a consecutive false aneurism, at the bend of the arm. This aneurism had resulted, not from an unfortunate

bleeding, as might have been supposed, but from an accidental wound made by a piece of glass. The puncture of the brachial artery had not been understood at the time of the primitive accident, or rather, the hæmorrhage had been restrained by too slight a compression, and continued for too short a time. A consecutive false aneurism made its appearance, and the tumor had existed about two months, and was about the size of a nut, when the child was brought to me for the first time. I tried compression upon the tumor itself, and on the whole limb. These means were ineffectually employed for a month. I then decided on making the ligature of the brachial artery almost immediately above the tumor. After having included the artery in two ligatures placed close to each other, both of which served to intercept the passage of the blood, I hesitated whether I should place supernumerary ligatures, thus placing myself under the necessity, of not uniting the wound; or, if I brought together the wound, of renouncing the ligatures of reserve. As the operation was practised upon a very young subject, in which the brachial artery had not yet acquired any considerable diameter, there was less to fear from consecutive hæmorrhage, than in an adult subject; there was, therefore, reason to expect the speedy obliteration of the artery: I placed no supernumerary ligature, and united the wound by the first intention. I had no reason to repent having

taken this step; no hæmorrhage took place; and the entire consolidation of the wound followed very closely after the coming away of the ligatures, which had restrained the artery, and which were employed without the interposition of any other body. I need not observe, that the tumor at the bend of the arm disappeared. I have taken minute notice of this operation, only to point out one of those cases in which, after having tied up an artery, we may almost, without any risk, dispense with placing ligatures of reserve, and bring the wound together; whilst, at the same time, in other cases, it would be imprudent to act thus.

It is, likewise, an abuse of immediate union to employ it, under all circumstances, in wounds resulting from amputation; I mean, of amputation in the continuity of a limb, and still more particularly of circular amputation. For, on the one hand, after amputation at one of the joints, which can scarcely be performed otherwise than by flaps, the immediate union of the wound is a circumstance almost of obligation; at least, in the present æra of surgery, it would be inconsistent not to unite the wound, but, on the contrary, to keep it open; the suppuration from it would be in too great quantity, even after having taken care to unite the flaps formed by the flesh around the joint. On the other hand, it would be altogether unscientific not to effect immediate union, after amputating with a flap in the continuity

of a limb; for the possibility of establishing between the divided parts, a more exact co-aptation, and more favourable to the speedy cure of a wound, than after circular amputation, is the principal reason alleged, in our days, in favour of the flap amputation. This is the most solid advantage which this method presents; and it might be said, that if, from the nature of the disease requiring amputation in the continuity of a limb, or from some circumstances in this disease, immediate union of the wound should be counter-indicated in an absolute manner, amputation with the flap would be so too. I will add, that it is sufficient to be prejudiced in favour of immediate union of the wound, after amputation of limbs in their continuity, to prefer the flap operation, in a great number of cases, to the circular one. One of these prejudices leads to the other.

But what doctrine shall I here oppose to that of the English surgeons? What practice shall I compare with it? There is no one general amongst us, or one that is even common to the greatest number of French surgeons. Far from our professing the same principles, or having the same practical views, relative to this immediate union of the wound, after amputation in the continuity of a limb; far from being agreed as to the cases where it is most applicable, or those, on the other hand, where it would be more disadvantageous than useful; this method is not even generally admitted in France:

it has still detractors amongst us. I cannot help referring to a work which I published last year,* the basis of which is formed on a great number of practical facts. At the same time that I extol in this work the immediate union of the wound after the amputation of limbs, and seek to fix the still uncertain opinion of some practitioners on the advantages of this method; I acknowledge that there are bounds to its utility. To assign these boundaries, to establish the rules of the immediate union in the particular case of amputation in the continuity of limbs, and especially of the circular amputation of the thigh, are two points to which I have particularly applied myself. Fresh observations have only confirmed me in the doctrine which that work contains. My ideas have only changed in regard to one circumstance, which I shall mention. I had shewed but little approbation of the immediate union of the wound resulting from the amputation of the leg, without pretending, nevertheless, that it never ought to succeed, or, still less, that it was impracticable; I have, on the contrary, tried it several times within these few months, and in every instance with success. It is not, indeed, by uniting

* Memoir and Observations on the Immediate Re-union of the Wound after the Circular Amputation of Limbs, and especially after Amputation of the Thigh. 1814.

the two halves of the circular edge of the skin, and applying them on the surface resulting from the section of the bones and muscles of the leg after the circular amputation, but, by bringing in contact two flaps, formed out of the flesh surrounding the tibia and fibula, consequently after the flap amputation of the leg. I shall speak hereafter of this amputation of the leg by two flaps, an operation, of which the idea is not new, but which was fallen into oblivion, and which may be substituted with advantage, for the circular amputation of this limb, in those cases where the immediate union of the wound is not counter-indicated.

The immediate union, or that by first intention, being the favourite method of the English in their treatment of wounds, they ought to have given their whole attention to render it perfect, to obviate whatever might oppose its results, to combine, in fact, all the circumstances proper for its success. Amongst the various precautions which I have seen used, there is one which appears to me extremely good, and which I have adopted in all cases where I unite, by the first intention, a wound, on the surface of which are blood-vessels, more or less considerable, and in greater or less number. It consists in cutting off close to the knot, one of the ends of the ligature. By this means, one half of the thickness of the bundle of threads is diminished, which are to traverse the wound, and remain between its

edges, in some point or other, of its length, and most commonly near one of its angles. This diminished size of the threads is not without some advantage; for the ligatures are extraneous bodies, which, as long as they remain in the wound, irritate it, determine and keep up suppuration. There is certainly no doubt but that their presence is the principal obstacle to an adhesion without any suppuration, in those cases where the immediate union of a wound, of greater or less extent, is attempted; and if there were any means by which a wound that was to be united by the first intention, should not be traversed by ligatures, the success of that immediate union would be still more certain.

But could not all the ligatures be cut off altogether close to the knot on the artery, in wounds that are intended to be healed by the first intention? Would there be much risk in enclosing within the wound, extraneous bodies, such as the knots of the ligatures? If a wound, on the surface of which several arteries have been tied, should be afterwards exactly united in all its points, would such small extraneous bodies be likely to present any obstacle to their agglutination? Would these extraneous bodies keep up an internal suppuration? If, on the contrary, it might happen, that these extraneous bodies should not irritate too much the parts with which they came in contact, perhaps they would not hinder the union of the wound in which they

were left, from healing as speedily as possible: and, perhaps, in time, their remains might be absorbed, and these knots of ligatures disappear entirely. Experience alone can instruct us on this subject, and destroy or confirm our conjectures. But should it happen that such hopes were realized, the art would have attained the highest degree of perfection, in what relates to immediate union of wounds: this method of treating wounds would procure the greatest advantages that it is possible to obtain.

At all events, it would be necessary to pay particular attention to the ligature of vessels, to take certain precautions not indispensable, when both or only one end of the ligature is to be preserved, before attempting to cut off close to the knots all the threads, in a wound to be healed by the first intention. It would be necessary to take care to make the ligature more immediately of each artery, than is commonly made. Care must be taken not to apply the thread too high above the mouth of the artery, so that a very small portion of the vessel shall remain below the ligature, destined to mortify. Lastly, I think it would be well, to employ smaller ligatures than those commonly made use of, still observing to proportion them to the size of each artery; and, to prevent losing the necessary strength, it might, perhaps, be proper to substitute silk for the common thread.

This project of cutting all the threads of ligatures

made on the surface of a wound that is to be healed by the first intention, has long since suggested itself to my mind, without my having yet dared to do any thing in it. Other practitioners, enlightened men, have conceived the same idea, and have stepped before me as to its execution; and if the advantages which it promises were confirmed by experience, the French and English surgery would, in this instance again, as in so many others, have to dispute the honour of a useful invention. I know, indeed, that since my journey to London, Mr. Lawrence, a young surgeon, attached to St. Bartholomew's Hospital, decided on cutting the threads of all the ligatures, before effecting the immediate union of the wound in an amputation of the thigh: I am altogether ignorant of the result of this first attempt, or whether Mr. Lawrence has repeated the same experiment. But previously to that, as it appears (it was last year when the hospital gangrene complicated, in so dreadful a manner, all the gun-shot wounds in almost all the hospitals of France), M. Delpech had recourse to the same expedient, after a great many amputations that he performed in the Hospital of St. Eloi, of Montpellier. It was with the view of doing away with even the smallest trace of the wound, so as not to leave it, in any one point, accessible to the contact of the air, and to keep off as completely as possible, whatever could contribute to the production of the hos-

pital gangrene, in the wounds resulting from the amputations of limbs. M. Delpech expresses himself as follows, in his Memoir on the Hospital Gangrene. "If we had not been before convinced of "the utility of immediate union after amputations, "the danger of seeing the stumps infected with the "gangrene, would have naturally led us to this "practice. Nevertheless, it has not proved sufficient, and we have been obliged to adopt particular precautions. The threads of the ligatures, "although distributed about, in order to lessen their "interposition, and the wound which they keep up, "have, notwithstanding, proved the cause of the "evil we wished to avoid, by leaving some external suppurating surface. The hospital gangrene "seized on these points; and though it made a very "slow progress on account of the narrowness of "the space, it has not failed, in the end, to destroy "the new cicatrix, to denude, and form a *necrosis* "of the bone, and make a conical stump, whenever "it has been left to itself. In order to avoid this "inconvenience, we adopted the resolution of not "leaving the ends of ligatures, but cutting them off "close to the knot, so as to have no longer any "interposition, and to be able to effect an exact "and complete union. From that time, having no "longer any external wound, we had no more hospital gangrene after our amputations." From the manner in which M. Delpech expresses him-

self, it may be seen, that it was in more cases than one where he decided on cutting the threads of ligatures made after the amputation of a limb, in order to unite the wound more completely. But what have been the result of this new practice in the different cases in which M. Delpech had recourse to it? Did no suppuration take place in the wound so perfectly united in all its points? Has the stump become more quickly consolidated than in those cases where the ligatures are preserved, either united in one bundle, or distributed through different points of the wound? Did nothing happen to the stump, was there nothing observed, either during the process of re-union, or consecutively, which depended on the presence, the incarceration, of the knots of the ligatures in the midst of the wound? In a word, have any other advantages arisen from the section of these ligatures than that of having prevented the development of the hospital gangrene in the wounds resulting from the amputation of limbs? On these points, M. Delpech does not explain himself.

I have hitherto hesitated to try this new practice after the amputation of limbs; but I have employed it for other wounds, on the surface of which I had only occasion to tie some very small arteries. Three times already, after the amputation of cancerous tumors of the breast, having been able, after going beyond the utmost limits of the disease, to preserve

a sufficient quantity of integuments to unite the wound by the first intention, I have effected this union, after having cut off all the ends of the ligatures. I cannot assert, that the cure of the wound was much accelerated by it. The ligatures applied after the amputation or extirpation of cancerous tumors of the breast, are commonly so small, and even when preserved between the lips of the wound that has been united by the first intention, they separate so quickly, that it is, in a great measure, indifferent with respect to the time necessary for the cure of the wound, whether they be, or be not, left between its edges. I wished only to try what would be the effects of leaving the knot of each ligature in the bottom of the wound, when the edges of it were exactly united. The consequence was, that these knots of the ligatures did not escape; nor did their presence in the bottom of the wound prevent the success of the immediate union; and since the apparent cure of these patients, I have not been able to learn that the presence of these small extraneous bodies was the cause of any subsequent accident.

Since we are, for the moment, speaking of the immediate union of the wound succeeding to the removal of scirrhous or cancerous tumors of the breast in women, I shall take this opportunity to say, that this union applies and succeeds better in general, after the amputation, properly so called,

than after the simple extirpation of these tumors. It is one of those cases in which, without being lavish of immediate union of wounds, as the English surgeons are, we may still employ it a little oftener than we do; it is one of those in which I am most an advocate for it. A number of times, especially after the amputation, properly so called, of a part, or the whole of the breast, I have obtained in fifteen, eighteen, or twenty days, the perfect union of wounds, which, if left to suppurate, would have taken two months, or two months and a half, to heal by cicatrization. I have, then, recourse to immediate union, and rather after the amputation, than after the simple extirpation, of carcinomatous tumors of the breast, whenever it is practicable, that is to say, whenever I can, without effort, and without doing violence to the neighbouring parts, approximate the edges of the wound. I hesitate so much the less in adopting it, as I do not think that it can, in any manner, be advantageous for such a wound to undergo a copious and long suppuration. I do not believe, that that internal disposition, that general depravation of the habit, which so frequently brings on a return of the cancerous affection, can be destroyed, or even weakened, by the suppuration of a wound healing slowly by cicatrization. I should rather incline to the opinion, that the local irritation, which is always in this case greater, and of longer duration, than when

the immediate union is effected, may hasten the development of a fresh cancerous affection even in the very part where the first existed. Two circumstances arising from observation, strengthen this conjecture. On the one hand, it is not very uncommon to see a cancerous affection revive in the part which was the seat of the first one, before the wound, succeeding to the operation, is entirely cicatrized. Secondly, in the case even where this wound does arrive at a perfect cure, it frequently enough happens, that it exhibits, during the process of cicatrization itself, a phenomenon, which may be considered as an almost certain index of the re-appearance, sooner or later, of the local disease, or else of the progress of the cancerous diathesis without the return of the local affection. The phenomenon of which I speak, and which was first taken notice of, I believe, by Mr. Boyer, and in which respect I have confirmed the observations made by that celebrated surgeon, is as follows. On a sudden, I mean to say in the interval, between one dressing and another, and without the occurrence of any thing which may have previously indicated that such a thing was about to take place, the wound exhibits marbled spots, projecting as little as possible, or (if it be preferred) a species of vegetation, softish, flattened, mostly of a grayish colour, and sprinkled over with blackish points. Sometimes there only exists one, of greater or less extent; most com-

monly there are several, and in the intervals between, the wound preserves its former vermilion colour. From the instant that they made their appearance, and during the whole time they exist, the wound is a little more painful than it had before been: it furnishes a more abundant and more serous suppuration, and the patients experience a general uneasiness. It is in vain to attempt any thing to restore the former appearance of the wound: these spots, these kind of vegetations, disappear spontaneously after a few days. But if there are cases where they appear once only during the existence of the wound, there are others in which they appear several different times, and at longer or shorter intervals.

The phenomenon we have just described does not occur in accidental wounds, nor in those which succeed to operations, excepting such are performed for cancerous tumours; and its non-appearance in such wounds, is a sign sufficiently favourable, but by no means certain, that the cancerous affection will not return.

Ulcers, as well as wounds, constitute a disease common to almost all the parts of the body; they may also affect different systems of organs. In fact, though they affect most commonly the skin and cellular texture, they sometimes extend also to the aponeuroses, muscles, and vessels: they often establish themselves on the mucous membranes, and

attack also, even in the first instance, the bones; for the caries in the bones is a state of erosion, of ulceration similar to the ulcers, properly so called, of the soft parts. But what more than that, establishes a sort of connection, I might almost say relationship, between wounds and ulcers, is, that we very often see wounds change into ulcers, through the intervention of some cause, whether local or general, which impedes cicatrization. Ulcers then frequently succeed to wounds. On the other hand, an ulcer, whether it has been preceded by a wound or not, does not heal until it is brought into the condition of a wound, with a loss of substance, the suppuration of which brings on cicatrization; and such is in fact the state under which an ulcer presents itself, when we have succeeded in destroying or removing the cause which constituted it such. It is for this reason that it is so difficult to establish a precise boundary between wounds and ulcers, and that some excellent pathologists have given the name of simple ulcers to wounds in the state of suppuration, and which are proceeding naturally to a cure.

It is principally to ulcers of the legs that the English apply a method of treatment, which bears such a contrast with the method we generally employ, that one can with difficulty conceive that it is possible to arrive at the same results by two ways so different. In the legs, as well as elsewhere, ulcers owe their existence to an interior or remote

cause: they are the apparent effect, the symptom of a general affection of the constitution. Thus we see in the legs, as well as in other parts of the body, scrophulous ulcers, consecutive venereal ulcers, &c. But in the legs, more than in any other part of the body, ulcers are kept up by a local cause, by a disease of the part itself which is the seat of them. These ulcers, from a local cause, put on different aspects. Some are remarkable for the inflammatory fulness of the neighbouring parts; others, which are of longer standing, for induration, and the callous state of their edges. What distinguishes some, is the fungous state of their surface. There are others which are accompanied with a varicose distention of the skin and cellular texture of that part of the limb where the ulceration has not extended. But these different states are but accessory circumstances, epiphenomena, or, if you will, varieties of the disease; the immediate cause of which is, in all cases, a state of debility and atony of the affected parts. From this consideration I should applaud the idea conceived by one of our modern writers, of giving to these different ulcers the common name of atonic ulcers, if this denomination did not leave to superficial minds to imagine, that the cure of these ulcers can only be obtained by fortifying and tonic applications, whilst, at the same time, complete success is obtained in the greatest number of cases, by a method

essentially debilitating, such as that which consists in keeping the part affected in a horizontal position, in a state of immobility, and covering it with emollient topical applications. This is indeed the manner of dressing ulcers of the legs, except such as arise from a specific cause, or a general disease of the constitution, which most of the French surgeons have adopted. Some details on the subject will enable us to appreciate properly the method employed by the English surgeons, or at least that which I have seen put in practice in all the London hospitals.

Suppose then an ulcer of the leg, which appears to us to constitute an affection purely local; that this ulcer is, or is not attended with inflammation in the neighbouring parts; we subject our patient to rest, we oblige him to keep his bed until the entire cure of his disease. The ulcer is covered with a thin layer of soft lint, above which is applied an emollient cataplasm, which should cover the neighbouring parts to a considerable extent. This cataplasm is changed every day, as well as the charpie which is in contact with the surface of the ulcer. If this surface be very extensive, or very deep; if it furnishes a copious suppuration, the dressing may be renewed twice in the twenty-four hours; this is particularly required in hot weather, when the pus quickly acquires a strong smell, and where the mucilaginous topics, such as our emollient

cataplasm, become easily sour. A temperate regimen, and slight tonics internally, are usefully combined with the local treatment. In a short time the edges of the ulcer, which were thick and tumefied, subside, the bottom rises, the whole surface puts on a less brown appearance, and tends towards a vermilion; the discharge is of a better quality; the pain diminishes; the surrounding parts, which are almost always distended, subside; and in a tolerably short time the ulcer puts on the appearance of a wound with loss of substancein a state of full suppuration, and of which the cicatrization is on the point of beginning, or has already begun. Not, however, that there is a perfect similitude between an ulcer in a healing condition, and a wound with loss of substance in which suppuration is well established; an eye, ever so little habituated, knows very well how to distinguish one of these affections from the other. In a wound, properly so called, with loss of substance, already suppurating, or in which the process of cicatrization is already commenced, the progress of which has not been interrupted, the surrounding teguments preserve their natural colour and suppleness. On the contrary, those which surround an ulcer, even when this ulcer presents the most favourable aspect, have a livid tinge, they have partly lost their elasticity; it seems also the subjacent cellular texture is more dense than in its natural state. If to these two circum-

stances you add, that when by rest and emollient applications, we have succeeded so far in changing the appearance of an ulcer as to see the process of cicatrization commencing, the local atony still continues, you will have the natural explanation of a very certain fact, which is this; that the cicatrization of an ulcer is much slower than that of a wound of the same dimensions, and that the entire consolidation of the former must be looked for at a much longer time than that of the wound.

It is very common, in the treatment of ulcer, that we persist in the use of emollient cataplasms, after the ulcerated surface has come to that state to which cicatrization ought to succeed: it is even necessary that this be well advanced, that there be nothing more to gain for this cicatrization, to keep the teguments surrounding the ulcerated surface in a state of relaxation and suppleness, to induce us to cease the application of our cataplasms, and dress the wound with dry lint like a simple wound. Until then we conceive that we ought to strive constantly against the obstacles which the rigidity of the skin, and the density of the subjacent cellular texture put in the way of the cicatrization. Only, in order to keep as much as possible the ulcerated surface itself from the too relaxing action of the cataplasms, it is then covered with a thicker coat of charpie than in the beginning of the treatment. Having at length arrived at the moment when emollient topics are of

no further use, the ulcer ought to be dressed with dry lint, like a simple wound, paying attention to repress from time to time the surface, by touching it with the nitrate of silver. Sometimes we must have recourse to one of those plasters called desiccative, and which are such because they are tonic; such as that of Nuremberg, the diapalm, the green balsam of Metz; plasters which may be replaced by, or their effects seconded by the application of a bandage slightly compressive.

Such is our ordinary method of treating ulcers of the inferior limbs, which constitute an affection purely local. Some indeed resist it, but it most commonly succeeds. That of the English surgeons, so different in many respects, is, as I have already hinted, a sort of extension of the immediate union as applied to wounds. It consists in surrounding the limb, on a level with the ulcerated surface, and a little above and below it, with long straps of an adhesive plaster, such as they employ for retaining in contact the edges of a wound which is to be healed by the first intention. The two extremities of each strap, being drawn in contrary directions, approximate the edges of the ulcer, crossing the direction of it. They apply as many of these adhesive straps as are necessary for covering entirely the ulcer. At first, and until the suppuration become less copious, they are renewed every day; this is necessary for keeping up, in the same degree,

the compression which they make upon the circumference of the limb, since one of the effects, and a very speedy one, of the application of these straps, is the diminution of the fulness of the parts surrounding the ulcer, which cannot take place without the strap itself being relaxed. But at a later period, and especially at the moment when the ulcer begins to cicatrize, they only renew them every second or third day, or even less frequently. They may be applied in such a manner that their edges overlap each other a little, so that no point of the ulcerated surface is left uncovered; or a very small interval may be left between their extremities for the discharge of the matter. At every part of the treatment they keep on the adhesive straps, and endeavour to prevent the puffing up of the soft parts below the seat of the ulcer, by the application of a roller, slightly compressive, over the whole extent of the limb. The patients are not confined to rest; they are allowed, if not to follow laborious occupations and to make forced marches, at least to get up and walk about.

This mode of treating ulcers, the first idea of which, I believe, belongs to Underwood, has some affinity to that by compression, so much extolled by Theden for varicose ulcers, and which was highly spoken of by Desault. When I saw it employed in the London hospitals, I did not apply myself to following its results, knowing well that in a short

time I should be in no want of opportunities of putting it in practice, if I wished to appreciate the effects of it myself. I could beside scarcely persuade myself that I did not perceive some exaggeration in the account given me by the English surgeons of its efficacy; and I returned from London so much prepossessed in favour of our method of treating ulcers, that I was in no hurry to try the English method. Now, on the contrary, that I have made the trial, I find in this method advantages which I had not at first perceived; and I am persuaded, that if it is not preferable to our own, under every circumstance indifferently, it is so at least in a great number of cases, and great advantages may be gained by it. I have made myself perfectly acquainted with the manner in which it acts, and am no longer astonished at its efficacy. The immediate pressure, and especially that equal and uniform pressure produced by the adhesive straps on the whole circumference of the limb on a level with the ulcer, is extremely proper for dissipating that œdematous tumefaction which extends to some distance in the neighbouring parts of an ulcer; it is not less proper for preventing the increase of that tumefaction, and the extension of the ulcer, two circumstances to which the vertical position and exercise of the limb in persons affected with ulcers of the leg, which are left to themselves, or treated according to our method, give rise. Perhaps also

the substance of the plaster with which the straps are covered, may contribute, by its resolutive action, to the dissipating the hard and callous state of the edges of an ulcer, whilst that state exists: and, under other circumstances, the simple pressure produced by these straps accelerates or even provokes the agglutination of the edges of an ulcer, whilst the neighbouring teguments are grown thin and relaxed to a certain extent. Who does not perceive that, by the manner in which the adhesive straps are applied, and by which they act on all the points of the circumference of an ulcer, which they approximate towards the centre, that that part of the work of nature in the cicatrization of ulcers, or wounds with loss of substance is effected by them, which consists in the diminution of the extent of these solutions of continuity, by the simple extension of the neighbouring teguments, before the cicatrization, properly so called, begins to form? In fine, an ulcer, treated by adhesive straps, being itself submitted to the immediate pressure which is made on all the other parts of the circumference of the limb, this compression opposes the exuberance of the cellular sprouts, and the production of that fungus, which, in all other methods of dressing ulcers and wounds in a state of suppuration, incessantly impedes the rapid progress of the cicatrization.

At the moment when I determined on trying the

English method of treating ulcers of the inferior extremities, kept up by a local cause, I had the opportunity of employing it frequently. These kind of ulcers, an affection not very common amongst people of the higher ranks, is one of those cases of surgery which occur but seldom in private practice, are, on the contrary, very frequent amongst the inferior classes of society: consequently, the opportunities of seeing and treating them, occur very frequently in hospitals. There are times, especially in the winter, when we have, in the surgical wards of the *Charité*, a great many more cases than we want of ulcers of the legs, and more than are necessary for the instruction of the pupils. I have, then, already before me, a considerable number of facts relative to the treatment of ulcers by adhesive straps. These facts multiply every day; without, however, giving to this method an exclusive preference, it is, nevertheless, that which I most commonly employ. It is very simple, one might almost say economical, and on that account much adapted to hospital practice; it procures a more speedy cure than is obtained by our mode of treatment: it has, above all, the great advantage of not subjecting the patient to absolute confinement.

Although ulcers are of the number of those things the most common in surgery, and although it may be easy for every practitioner to confirm the treatment of them by adhesive straps, I consider it not

altogether useless to relate some of the cases in which I have adopted this method.

A man of sixty years of age, of Villiers-le-Bel, a village in the neighbourhood of Paris, was admitted into the Hospital of the Charité towards the end of the month of November last year, in order to be treated for an immense ulcer which he had on the anterior and inferior part of the right leg. This ulcer, originating from a local cause, had callous edges, with varicose tumefaction of the part of the leg which was not ulcerated, and œdematous swelling of the foot. We first made use of the emollient cataplasms, confining the patient to rest. The ulcer soon changed its appearance, and was reduced in no great length of time to half its dimensions; less, however, by the commencement of cicatrization, than by the subsiding of the tumefaction of the neighbouring parts. But, arrived at that state, it remained some time stationary. It was not till then that I employed for this ulcer the adhesive straps. Their effects excited my surprise; under these straps, which were only renewed every second day, the cicatrization made a progress, which could be distinctly perceived at each dressing. The patient had risen from bed, and had walked about every day, since that on which I began the use of adhesive straps. The ulcer having no longer above an inch, or even less of breadth, I purposely left off the application of the adhesive straps: it again re-

mained stationary; and although covered with dry lint, its surface became covered with fungus, which could scarcely be kept down by the nitrate of silver. I resumed the straps; the ulcer again proceeded, but very slowly, towards cicatrization. The patient went out of the hospital perfectly cured, promising us to make use of a laced stocking, a method so efficacious in preventing the fresh formation of ulcers on the lower extremities. It was evident to me, that had I been able, by pursuing our ordinary method of dressing ulcers, to bring that one to a complete cicatrization, the progress would have been much slower, and the cure later.

The same day that the man above-mentioned quitted the Charité, there went out also a washerwoman of Gros-Caillou, in whom the treatment of ulcers by circular adhesive straps, had succeeded in a remarkable manner. This woman, who was twenty-eight years old, and of a strong constitution, had, for two years, on the internal ancle of the left leg, an ulcer, the condition of which she had several times ameliorated, by subjecting herself to various precautions, but which, from the moment of its formation, had never been entirely cicatrized. I did not see the patient till the third day after her entrance into the hospital; she had been dressed on the two preceding days with emollient cataplasms, and the ulcer had not yet, as I was informed, undergone any sensible change. It was of

an oval form, extremely regular from above downwards, having an inch and a half of extent in its greatest diameter, and rather more than an inch in the point of its greatest breadth. It was of some depth; the edges, which were hard and callous, were very thick, and formed perpendicularly to the thickness of the skin. This case appeared to me to be of the most favourable kind for trying the use of adhesive straps, and I immediately left off the cataplasms. I applied straps of *diacholon* plaster with the *gums*. A roller, slightly compressive, was applied on the foot, and on the inferior part of the leg, and I allowed the patient to get up, and walk about the ward. The next day, the appearance of the ulcer had already experienced a change; its edges had greatly subsided: in three days time, they were level with the surface of the ulcer, which was already granulating, and had put on a vermilion colour, and furnished matter of a good quality. The cicatrization soon after commenced, and made such a rapid progress, that the ulcer was entirely closed on the twenty-second day from the first application of the adhesive straps. The patient was only twenty-five days in the hospital. I do not exaggerate when I affirm, that it would have required, at least, six weeks, and perhaps more for the cure, in our ordinary method of dressing ulcers. During the whole of this time, we should have confined her to her bed; whereas, from the moment when I began the ap-

plication of the straps, which were renewed, at first, every day, and afterwards every other day only, the patient was not one single day without getting up, and walking about. The ulcer was not once touched with the nitrate of silver, its surface continued constantly on a level with the skin, as it should be in cicatrizing wounds and ulcers, to accelerate the progress of cicatrization.

On the 30th of April last, we received into the hospital a shoemaker, of thirty-seven years of age, who had, for three months, a callous ulcer on the interior and middle part of the left leg. This ulcer, which was of an oval form, had succeeded to a burn, caused by a boiling fluid, and was formed on a part which was the seat of an old cicatrix. It was two inches and a half long, and its greatest breadth was an inch and three quarters. This case appeared to me equally favourable for the use of adhesive straps, which could be so much the easier applied, as there was scarcely any calf, the leg being nearly the same thickness through its whole extent. The treatment of this ulcer in the manner we are describing, began the day after his admission into the hospital, and continued a little more than six weeks: on the 18th of June, the ulcer was completely cicatrized. For some time, the adhesive straps were renewed every day; afterwards, every second day only. During the treatment, the patient availed

himself of the liberty I allowed him, of getting up, and walking about the hospital.

At the same time that the preceding patient was in the hospital, I employed the same treatment, and with the same success, in a large ulcer from a local cause, on the anterior, middle, and inferior, part of the left leg, of a man fifty-two years of age, an agent by profession, and a native of Auvergnat, who came into the hospital on the 2d of May. This ulcer, which had already existed three years before, broke out again only six weeks back. It was more extensive from above downwards, than in a transverse direction, was four inches broad in the middle, and five inches long: the edges of this ulcer were red and inflamed; the inflammation extended even to some distance; the bottom of the sore was of a dirty white colour, and furnished a copious discharge, very tenacious, and of a disagreeable smell. I did not employ the straps of gum plaster till after three or four days, during which time, the leg was covered with an emollient cataplasm, and the patient confined to rest. He kept his bed after the application of the adhesive straps, and even during a great part of the time that the ulcer was cicatrizing, not on account of this ulcer, but because I had, in the beginning of his stay in the hospital, operated upon him for the cataract of both eyes. This operation (by extraction) succeeded; and as

soon as the patient could, without inconvenience, expose his eyes to the contact of the air and the impression of light, he was allowed to get up. Walking about did not suspend, or even relax, the progress of the cicatrization of the ulcer; it was as rapid as the bad state of the leg could permit: he quitted the hospital on the 27th of July. Although he was only cured a few days before going out of the hospital, where he made a stay of nearly three months, it appeared to us, that the cicatrization of the ulcer was much more rapid, than if it had been treated by emollient topical applications, after the usual method of French surgeons.

I shall now relate one last fact relative to the treatment by adhesive straps, of ulcers arising from a local cause, or kept up by a diseased state of the part itself, where they are situated. This last case is the more interesting, as the patient, for a reason very peculiar, was obliged to undergo amputation of the limb which had been the seat of the ulcers, against which this treatment had been directed, and had been for a long time followed by success. This patient is a young man of twenty-four years of age, who when he entered the Charité on the 5th of April this year, had on the right leg, not a single ulcer only, but fifteen or twenty ulcers, some small, some larger, some invading the skin of the knee, and the greatest number occupying the superior portion of the leg, in its anterior, exterior, and in-

terior part. These ulcers had been forming successively, one after the other, for three years. Those of the leg itself were of the longest standing: they likewise presented the worst aspect. In the spaces between them the skin was every where detached, and worn away, so that almost all these ulcers communicated one with the other by a kind of sinuses, from which, at the first dressings, a considerable quantity of matter was forced out by pressure. The leg was in a state of atrophy, and constantly bent towards the thigh, using no motion of the knee; and so much, indeed, was the patient wasted and exhausted, that, having little hope of ameliorating the condition of the leg, M. Boyer and myself, were almost resolved on proposing amputation of the thigh. However, we temporized with it, wishing to see what effect the methodical treatment of the ulcers would have. Fifteen days of application of emollient cataplasms, and during which the patient being submitted to the internal use of tonics and the most analeptic regimen which could be prescribed in a hospital, observed a strict confinement, produced no observable change in the appearance of the ulcers, when I decided on the use of the circular adhesive straps. As the form of the knee, and especially as it was constantly bent, was very inconvenient for the application of these straps, I used them only for the ulcers of the leg. For those of the knee, which had a less unfavourable

aspect, and round which, beside, the skin was not detached from the subjacent parts, I continued the emollient cataplasms. At a later period, however, as the leg had borne a little extension, it became possible to apply the adhesive straps to the ulcers of the knee. Both on the leg, and on the knee, these straps were only renewed every two days, but in the beginning, the precaution was taken to leave between them small spaces, to allow of the discharge of the matter, during the interval between the dressings. In a short time, there were no sinuses between the ulcers, the skin every where became united to the subjacent parts: the smallest ulcers cicatrized readily enough; the largest were also diminished in extent, and put on an appearance that seemed to promise their healing at a period, however, which it was impossible to determine, or to foresee. The movements of the joint became somewhat more free, and the patient having recovered some strength, was allowed to get up, and walk about with crutches. The cicatrization of the ulcers, which was, at first, very rapid, proceeded afterwards more slowly, being still under the influence of the same local treatment. Nevertheless, all those of the leg were brought to a complete consolidation; an equal smooth cicatrix, though rather thin, still solid, appeared in their place. There remained only the ulcers of the knee to cicatrize, which were already reduced to very inconsiderable

dimensions, and would undoubtedly have received a perfect cure; but the limb remained in a state of atrophy, while, at the same time, there was anchylosis of the knee, which was in a state of incomplete extension. Such was the posture of affairs, when, having for some time been persuaded, and with reason, that if the ulcers should be completely cured, he could never make use of an artificial leg whilst that limb remained; and that, being reduced to the necessity of walking with crutches, he could no longer continue his profession of a farrier, the patient suddenly formed the resolution of having the limb amputated at the thigh.

Considering that so serious an operation as the amputation of the thigh is not recommended by sound practice for cases of simple deformity of the inferior limb, we endeavoured, at first, to dissuade the patient from this extreme resource, without, however, saying too much respecting the dangers of the operation. But we were forced to yield to his intreaties; and applying to his peculiar case the principles I had adopted from experience, with regard to the circumstances in which the flap operation may be substituted with advantage for the circular, I took off the thigh of this patient by the first of these two methods. I made two lateral flaps: I prefer this method to that of forming a posterior and anterior flap, as recommended by some practitioners.

Fortunately, I had no cause to repent my compliance with the wishes of the patient, nor was he deceived in his expectations. I operated on him the 28th of the last month: some of the ligatures came away on the ninth day after the operation; the last was detached on the twelfth. It was only by the inferior angle of the wound that the discharge escaped from the stump until all the ligatures came away. From the moment that the wound was cleared of these extraneous bodies, the suppuration became every day less copious. This day (October 17th), the twenty-first day from the operation, the adhesion of the flaps was perfect: there remains only a very small surface to cicatrize, near the inferior part of the stump. The patient is likely to be perfectly cured before the end of the month.

These are only a few of the cases in which I have employed the adhesive straps for ulcers of the inferior extremities, which were not depending on any specific cause, or any disease of the constitution. It is for such ulcers that this treatment is best adapted. But it may also be, in some measure, efficacious against specific ulcers, especially when, together with local means, internal or general remedies adapted to the peculiar cause of these ulcers, are employed. I shall here give two facts in support of this assertion, and which may lead to further trials.

A few months ago, we had in the Hospital of the

Charité, a young man, of fifteen or sixteen years of age, with a scrophulous ulcer formed below the inguinal region on the right side, and in the end swelling and suppuration of several lymphatic glands in this part. At the same time that we were attempting to modify as much as possible the constitution of the patient by internal treatment, we endeavoured by a suitable choice of topical medicines, to hasten the cicatrization of the ulcers, which exhibited, to the greatest degree, the appearance of scrophulous sores. Various ointments, various plasters, simply applied to the surface of the ulcer, even slight escharotics, having been employed in vain for this purpose, I conceived the idea of dressing the ulcer with adhesive straps, which should surround the thigh, and covering and compressing the surface of the ulcer, should approximate its edges. The ulcer in a short time changed its appearance, and was brought to a perfect cicatrization in much less time than we had hoped for. The following case, according to all appearances, had some connexion with consecutive venereal ulcers.

An English gentleman came to Paris in the beginning of the present year, hoping to find there a cure for some ulcers which he had for two years on the left thigh, and for which he had in vain consulted the talents and experience of several London surgeons. Three of these ulcers, of no great extent, and differing in size, occupied the interior and

superior part of the thigh. One, more considerable than any of these, had its seat on the middle and anterior part. They had succeeded to a primitive venereal bubo. The opening of this bubo had never closed; but, instead of the ulcer first resulting from it remaining stationary, or growing larger without changing its place, this ulcer propagated itself from above downwards, cicatrizing on one side whilst it was increasing on the other; in such a manner, that when the patient arrived in France, and I saw him for the first time (in the beginning of January), the principal ulcer, and those which had formed subsequently, were all situated on the borders of a large cicatrix, which was thin and livid, and covered the whole inguinal region. The bottom of these ulcers was elevated in some points, and depressed in others: their edges, which were very irregularly traced out, were thick, and cut out into elevated points in one part of its extent; and, on the contrary, very thin, broken, and detached from the subjacent parts in another: the matter which they furnished was serous, and of a reddish colour: in a word, they presented, in the highest degree, the appearance of consecutive venereal ulcers. I did not, for a moment, doubt that such was their character. The patient did not, indeed, experience any of the other symptoms by which constitutional syphilis is commonly distinguished. But, how often do we see the venereal virus, although existing generally in

the economy, exhibit itself under one form only, and produce but one of those symptoms which generally are found in greater numbers in the same person! And especially in consecutive ulcers, whether of the skin, or on some part of the mucous system, more particularly in the throat, are they not frequently the only symptoms by which the venereal virus manifests its existence in the system? Nevertheless, the English surgeons, under whose care the patient in question had been for some time, were of opinion that the ulcers on the thigh were not venereal: to some, they appeared to be scorbutic; others thought them scrophulous: several considered them to be kept up, not by any specific cause, but by general debility of the constitution. They all agreed in recommending him to travel to France, and to make some stay in our southern provinces.

As he yielded with difficulty to the opinion I had given, that the ulcers were venereal, and the hope I held out that they would be cured by a mercurial course methodically directed, I induced him to consult other practitioners on his case. Two of our ablest surgeons, M. Boyer and M. Cullerier, were of my opinion; their advice was conformable to my own; and it was agreed, that the patient should submit to the use of frictions. These were employed for a month in the form of the Neapolitan ointment, half a drachm every second day only:

then a drachm of the same ointment, likewise, every second day for another month; he had just began to use frictions of a drachm and a half, from day to day also, when, becoming too anxious for the consequences of the events which were preparing in the month of March, he thought himself under the necessity of quitting Paris to return to England. The treatment, then, had been conducted with design, and, in order that it might be more efficacious, in such a manner, that the ulcers could not experience a prompt amelioration. With any other patient, I should have patiently waited the results of the action of the mercury on the animal economy, and have attached little importance to the dressing of the local affection. But the patient, perhaps, naturally gloomy and melancholy, and evidently rendered so by the fear he was under of never being delivered from his complaint, observed the dressings every day with the most minute attention. Not one of the smallest variations which could occur, whether good or bad, in the condition of the sores, escaped him: he had as great talent for despairing of his cure, when they put on a bad appearance, as for foreseeing the most fortunate event, when they looked better. This disposition of mind in the patient obliged me to add to the general treatment, topics, and that mode of dressing, which could most contribute to putting the ulcers in the way of cicatrization. I tried different topics in

succession, without any great advantage, observing, however, that emollients and greasy substances were least of all adapted to them. I had dressed these ulcers in seven or eight different ways, and they were, as nearly as possible, in the same condition, when the idea came into my mind to try the uniting straps, to which I could still give medical properties, by choosing what substance I thought best for the plasters. As I had before remarked, that every fresh substance applied to these sores produced a temporary good effect, I formed also the resolution to change frequently the composition of the adhesive straps. I succeeded, then, with them at first, and employed afterwards, alternately, at the interval of several days, the gum plaster, the plaster of Nuremberg, and that of *Vigo cum Mercurio*. This mode of dressing succeeded beyond my expectation, especially with the largest ulcer, which occupied the middle and anterior part of the thigh. The detached edges, which I had trimmed a little, were again fastened to the subjacent parts, the surface became of a vermilion colour, the pus of good quality, the cicatrization commenced on all points of their circumference, and proceeded, not so quickly as I should have desired, but with as much celerity as could be allowed, by the bad state of the neighbouring parts, and the incessantly renewing action of internal virus, on which the general treatment could only have exerted a slight action,

the patient having as yet taken only a very small quantity of mercury. When this gentleman was obliged to quit Paris, the ulcer of the anterior part of the thigh had only a few lines of extent, the cure of the others was less advanced.

Let it be said here only on account of the fact we have just reported, without regarding the fact itself, that the English physicians and surgeons are, I believe, far behind us with respect to venereal complaints, and particularly consecutive venereal affections. They were, for a long time, in the right way with regard to what concerns this kind of disease, and now give themselves up to the most obscure theories: they think themselves to be in a fair way of making important discoveries, and plunge themselves into crooked paths, to which I can perceive no ending. I wished to have been able to give the views of some amongst them particularly, on what they call the *pseudo-syphilis:* I had undertaken the task, but have now renounced it. They themselves allow that these ideas are not yet established; they themselves feel the necessity of appealing to experience. I shall only say, that what they think they are able to demonstrate, is, that a number of the diseases contracted in the venereal act, and which are believed to be syphilitic, are simply *venereal*, and not *syphilitic:* that is, that there are symptoms apparently syphilitic, which are not really so, but are often the conse-

quence of the untimely administration of mercury: that, in fact, ulcers, or other local affections, whether scrofulous, scorbutic, or produced by any disease of the habit, or by any other modification of the *system*, make their appearance very frequently in persons who have once been tainted by the syphilitic infection, and assume the physiognomy of the symptoms which this virus gives rise to, in such a manner, that they are mistaken for a chronic or constitutional syphilis.

I have one word more to say on the method of treating ulcers by adhesive straps. Perhaps from the manner in which I have spoken of them hitherto, I may have given reason to think, that it was not yet known amongst us, and that I was the first French surgeon, who had made the experiment of them. The only thing that is true is, that this method was altogether new to me when I saw it first employed in the London hospitals. Had any one of us a knowledge of it, and had he already made use of it? I am ignorant of this. No one, that I know of, at least, has made known the results of it, whether good or bad. It appears, that if it is not exactly this method, it is another which comes near it, that is employed without rules, without principles, and in a manner altogether empirically, and which is applied indiscriminately to all ulcers, by a man known in Paris, not for the cure, but for the treatment of bad legs, and whose re-

putation is too popular, not to rest on foundations more than equivocal.

The French surgery is arrived at a great height of perfection in the treatment of fractures. It is to Desault principally, that we owe the last improvements of this part of the art, at once so important and so extensive. Nothing essential has been added since his time. Desault even will preserve amongst us the glory of having effected a sort of revolution. He was the first to throw some light upon the fractured inferior maxilla. He first established the indications to be fulfilled in fractures of the clavicle, in order to make successful opposition to the incessant causes of displacement; and the apparatus which he invented for these fractures, however imperfect it may appear, and in spite of the objections made to it, will survive, perhaps, other inventions to which it has served as the model.

It is Desault, also, who has simplified and perfected the treatment of fractures of the neck of the humerus. He introduced useful modifications into that of fractures of the superior limbs. We ought, however, to except the fractures of the olecranon, for the treatment of which, the method of Camper, which consists in making a half flexion of the forearm upon the arm, and by using movements of it at an early period, to which a greater exertion is given by degrees, is far preferable to the perfect extension of those two parts of the arm, and their

perfect immobility during the whole of the time necessary for the consolidation of the olecranon. Should it even happen, by following Camper's method, that by reason of the elongation of this eminence, the extension of the fore arm cannot be effected so strongly, or in so complete a degree as it enjoyed before the fracture, that can scarcely be reckoned an inconvenience: the essential movement of the elbow joint, for the purpose of the superior member, is flexion: a perfect extension of the fore-arm upon the arm is almost useless: it is observed even that it does not naturally take place in the greatest number of persons whose muscular system is strongly developed. As, on the contrary, in the inferior members, the extension of the knee is not less useful than its flexion, for standing and progression, a considerable elongation of the rotula, after a transverse fracture of this bone, is a cause of difficulty, and sometimes of exceeding great difficulty in the movements of the limb; we ought then to use every effort possible to prevent an elongation of the rotula. On this account, the treatment of fractures of this bone requires an attention altogether different to those of the olecranon; it should be conducted on principles, if not opposite, at least very different. In general, the rotula has been too much assimilated to the olecranon, and this again to the rotula. This bone and that apophysis have indeed some analogy in their

respective destination; but each of them has also its peculiar uses. In the same manner, the fractures of both, which may be in some respects compared, differ greatly in others.

Desault has been more happy, or better inspired, when, in assimilating fractures of the rotula with transverse wounds in the fore part of the thigh, in which the muscles have been deeply divided, he proposed for their treatment the simple uniting bandage of transverse wounds. In fact, that apparatus, applied with care and the necessary precautions, accomplishes, not indeed so perfectly as it might be wished, but as much as is possible, the object proposed; that is to say, with this apparatus, we succeed, if not in bringing and preserving in immediate contact the two fragments of a transverse fracture of the rotula, but in diminishing greatly the interval which separated them at first, and in effecting a consolidation of the fracture, without any considerable elongation of the rotula.

Who has revived amongst us for the fractures of the neck of the femur, and for some also of the body of that bone, the continual extension? Desault again. It is known, that since the time of the father of physic, who expressly recommended it, the continual extension has experienced many alternatives of favour and discredit. Desault found it once more abandoned; by drawing it out from the oblivion into which it had sunk, and by contriving for this

extension an apparatus, defective indeed, but which has led to more perfect inventions, Desault has rendered an important service to the art.

In fine, what happy changes has not the same celebrated surgeon brought about in our containing apparatus for those of fractures of the thigh which do not require the continual extension of the limb, and for fractures of the leg? He brought again into use, for the immediate compression of the fractured limb, the bandage of Scultet; a bandage so simple, so well adapted to the purpose proposed, that of keeping up the pressure nearly equal, without producing any movement of the limb, that it is astonishing that the roller and eighteen-tail bandage should have been so long preferred. To the *fanons* and *faux-fanons**, means intended for submitting the limb to a second compression, for keeping it in its natural direction, for withdrawing it from the action of external causes which might alter the situation of the broken bones, and for insuring thus the exact coaption of the ends of the bone, Desault substituted the splints, the use of which, being more efficacious than the above-mentioned articles, is rendered free from all inconvenience by the pads interposed between them and the limb, which is covered by the bandage of Scultet.

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* Pieces of wood in use before splints, for retaining fractured limbs in their position: the *ferulæ* of the ancients.

All these changes introduced into the art of treating fractures, which appear to us so many uesful innovations, have not been considered as such by the English surgeons; and for having rejected them, or for not having adopted them, they have remained behind us in this important part of surgical treatment. The English surgeons profess, even with respect to fractures, certain opinions which lead to a defective practice. It is thus that they still consider as impossible the consolidation of the neck itself of the femur, that is to say, of fractures situate between the trochanters and the head of the femur, within the insertion of the capsular ligament; the internal fragment, which comprehends the head of the bone and a portion of the neck which supports it, having no connexion with this ligament. The natural consequence of this opinion is, that such fractures should be left to themselves; in vain would they labour to bring the limb back to its natural length, or even to keep it in a state of immobility; it is only in fractures which are on the outside of the articulation, and in which the internal fragment is surrounded by the whole, or by a part of the fibrous capsule of the joint, that the fulfilment of either of these indications can be attempted, since, amongst all the different kinds of fractures included in the common denomination of fractures of the neck of the femur, these only are capable of consolidation. We believe, on the contrary, or rather, it

is demonstrated to us, that nature equally effects the consolidation of fractures of the neck of the femur, but with this peculiarity, which I have almost constantly observed; that the neck of the femur, when consolidated after a fracture, is deformed and shortened: the head of the bone is greatly approximated to the trochanters. Beside that, on sawing through the head of the femur, the neck, and the great trochanter, in a manner convenient for observing the internal state of the callus, or the trace of the consolidation, this trace presents a curved line, the concave part of which is sometimes on the side next to the head of the bone, and at other times on the side of the base of the callus. It might be said, that in the beginning of the fracture, the fragments corresponded by surfaces, one of which was convex and the other concave: but I am of opinion rather, that this disposition is the effect of a change which takes place in the surfaces of the fracture during the process of consolidation. What is however true with regard to fractures of the neck itself of the femur, and which to a certain point corresponds with the opinions of the English surgeons, but without justisfying it, is that in these fractures the perfect union of the broken ends takes place more slowly than in fractures outside the articulation: for this reason in the former more than in the latter, very advanced age, or an extreme debility of the patient, may be an obstacle to the

consolidation. When in London, I agreed with Mr. Cooper to send him over a preparation of morbid anatomy, such as was proper for removing all the doubts which he, in common with the other English surgeons, entertain respecting the possibility of the consolidation of fractures of the neck itself of the femur. The first one I sent him, has not proved sufficient to induce him to change his opinion: the trace of the consolidation appeared to him to point out such a fracture, that the internal fragment must have had, towards its inferior part, some connection with the capsular ligament. Circumstances have not allowed of my sending him more anatomical preparations, which might demonstrate still better the possibility of the consolidation of fractures of the neck itself of the femur.

I should have reckoned the error of the English surgeons with respect to fractures of the neck of the femur of little importance, and perhaps should have taken no notice of it, if I had not occasion to criticize their method of treating the other kinds of fractures. It is more particularly in fractures of the lower extremities, I mean those of the middle of the femur, and in fractures of the leg, that their practice has appeared to me to be much inferior to our own; yet it is in these fractures that we ought to seek to give the greatest perfection to the operations of art; for a deformity, more or less disagreeable, and sometimes even lameness, from the shortening of the

limb, is the consequence of their defective consolidation. We may add, that next to those of the humerus, the fractures of the leg and thigh have the greatest tendency to form preternatural articulations.

The reducing one of these fractures, is, in many cases only placing the fractured limb in that position which it is to retain during all the time necessary for the formation of the callus, and applying for the first time the retentive apparatus. The consecutive treatment is essential in a very different respect, and this treatment consists in removing, from time to time, the apparatus destined to compress the limb, to weaken the action of the muscles, and to act incessantly against the accidental causes that may displace the broken portions. In thus removing the apparatus of a fracture of the leg or thigh, frequently until the period when consolidation begins to take place, but more rarely afterwards, we set about ascertaining at the same time, the good condition of the limb, and remedying, if there be still time, any imperfection in the position of the broken bone.

For what concerns the retaining apparatus *(appareil contentif)*, as I have already observed, we are of opinion, that we have brought the art to the highest degree of perfection by adopting the ancient bandage of Scultet, and using flat splints with pads. Such an apparatus possesses, in its different

parts, all the solidity we can wish: it can be removed and re-applied as often as occasion requires, even every day, if necessary, without giving any movement to the fractured limb; and, as to the position of the limb, another essential thing in the treatment of fractures, especially of the inferior extremities, we have preserved the position called horizontal, a position in which the limb touches with its posterior surface the plane on which it rests, and that the articulation of the leg with the thigh, and the thigh with the pelvis, is in almost a perfect state of extension. The limb is thus kept in a direction parallel to the axis of the body, excepting the foot, which is fixed at a right angle with the leg. It is more particularly in fractures of the thigh that it appears to us indispensable that the limb should be kept in a state of extension, that is to say, in a direction parallel to the axis of the body. In fractures of the leg, on the contrary, we may, in order to prevent too great a stiffness of the knee-joint, place the fractured part on a plane still horizontal, but a very little elevated above the thigh, which can only be effected by this latter being slightly bent towards the pelvis.

I do not believe that there is at present one single good surgeon who is an advocate of Pott's method in the treatment of fractures of the leg and thigh; a method which consists in putting each of these parts into a state of half flexion, both for the re-

duction itself of a displaced fracture, and after this has been effected, and beside, to make the limb rest horizontally on its outer side during the whole time necessary for the formation of the callus. The half-bent position of the limb in fractures of the leg or thigh is of no use, and presents no real advantages except in some fractures complicated with wounds so situated, that, for the daily dressings, it would be necessary to lift up the limb if it were placed in a state of perfect extension. By putting it into a half-bent position, and making it to rest on the external side, we should avoid the moving it, which would be attended with pain to the patient, and would counteract nature in the process of consolidation. The half-bent position of the limb is useful in cases of this kind, as the horizontal position, or rather that parallel with the axis of the body, would be in others if the former was the method generally adopted. In other respects, and in simple cases, in those which most commonly occur, the half-bent position of the limb is far from presenting the advantages attributed to it.

Let us suppose, as Pott has pretended, that it is a means of overcoming the obstacle opposed by the spasmodic contraction of the muscles to the reduction of certain fractures, especially of oblique ones, accompanied with a shortening, more or less considerable, of the limb, is that then so great an advantage? Who does not know that the spasm

of the muscles, however considerable it may be at first, does not continue beyond a few days, and that it gives way to rest of the affected part, to the topical application of emollients, or slightly narcotics, especially if care be taken to reduce the patients by a low diet, more or less severe, and by bleedings reiterated according to their age and constitution? We may defer the reduction till the spasms of the muscles has ceased so much the better, as an exact co-aptation of the fragments of a fractured bone, from the moment that the continuity has been interrupted, is of no advantage, either for the process preparatory to consolidation, or for the consolidation itself. In fact, the case is not the same with fractures as with wounds of the softer parts. In a wound of which the union may be attempted and expected, without suppuration, there is every thing to be gained by bringing the edges speedily in contact; a few days, during which such a wound should be left to itself, and, for a still stronger reason, would be covered or filled with extraneous bodies, would be sufficient to render the union by the first intention impossible, and suppuration inevitable, because, by whatever way nature is herself set about the cure of wounds, the phenomena which lead to this cure, take place and succeed each other with great rapidity. In fractures, on the contrary, the delay which may happen to the placing the ends of a fractured bone in perfect

co-aptation, does not cause the consolidation to take place in one way more than in another: the the mechanism of this consolidation is one; and whereas, on the other hand, the process preparatory to the formation of the callus embraces a space of time sufficiently long, it may be said that previous to a period sufficiently distant from that of the production of the fracture, the reduction of this fracture is not urgent: we may almost with impunity defer, till this period, the rendering as exact as possible the co-aptation of the fragments, and the maintaining them in a state of perfect immobility.

The half-bent position of the thigh towards the pelvis, and of the leg towards the thigh, offers no more advantages for the treatment consecutive to the reduction of one of these limbs than for the reduction itself. It would be useless to assert, that by this position of the limb, all the muscles which could have contributed to the primitive displacement of the fracture; and to which their continued action could afterwards give occasion, being put into a middle state between relaxation and contraction, one of the causes of this consecutive displacement is thereby greatly weakened. This could only happen with regard to oblique fractures, which are almost the only ones in which the muscular action necessarily tends to make the broken ends ride one over the other: but even in these fractures the tendency to displacement, by the action of the

muscles is much more efficaciously opposed by exact and uniform compression of the limb, such as that resulting from the application of our ordinary apparatus, than by the position of the limb in a state of half flexion.

It would also be useless to assert, in favour of this method, that after the consolidation of a fracture of the thigh or leg, for which it has been employed, the play of the joints above and below the fractured limb is more quickly re-established, than when the limb has been placed in a state of complete extension. In order to understand how far this advantage is imaginary, we must keep in mind two things: the first is, that whatever be the attitude of a joint, which is to be kept for a length of time in a state of perfect immobility, this joint always contracts a stiffness, more or less considerable, and, for a time, passes into that state which is called a false anchylosis; the second, that in fractures of one or both of the principal parts of the inferior extremity, the joint below the fractured limb is always that in which the stiffness is most remarkable, and in which the movements require a longer time to be re-established: thus, after a fracture of the leg, the knee recovers fast enough the freedom of its natural motions; those of the joint of the foot are restored much later: and, after a fracture of the thigh, almost at the moment when the patient begins to support himself on his crutches, he is able

to move the thigh on the pelvis; it is not frequently till after several months, that the knee recovers the freedom of its movements. Well, it is evident, that in a fracture of the leg, the half bent position of this limb upon the thigh can do nothing, so that after the consolidation of the fracture, the joint of the foot may more speedily recover its natural movements, since the foot is no otherwise placed, than if the leg was in a state of perfect extension from the thigh: in either position of the leg, the foot is kept bent nearly at a right angle. The case is not the same with the knee, after a fracture of the thigh. If the half bent position be employed, the leg, after the consolidation of the fracture, remains immoveable on the thigh in a state of flexion; now, the knee in that state does not sooner recover the freedom of its movement of extension, than it recovers the freedom of its movement of flexion, when the leg has been kept extended during the treatment: the patients, moreover, experience the inconvenience of having the limb suspended so long as the false anchylosis lasts, and of not being able, till at a late period, to put the foot upon the ground.

Thus, then, the half-flexion of all the parts of the inferior extremity in fractures of the thigh and leg, do not possess the advantages for which they have been so much recommended by Pott, and who caused them to be adopted, for a time, by some of the French surgeons. There is still more, for unless

some particular circumstance in the fractures complicated with wounds, renders it indispensable, it is attended with a great inconvenience: all the parts of the inferior limb being half bent in a fracture of the thigh or leg, it is difficult to be assured, from time to time, whether the fractured part preserves its proper length, its direction, or, in a word, its natural conformation; there is a much greater risk, than when the limb is kept extended, of obtaining a deformed consolidation. This is, above all, to be feared in fractures of the thigh, for which, besides the half bent position, there is this other inconvenience, that it obliges us to confine the action of retaining apparatus to the thigh only, and not extend the splints to the leg.

Notwithstanding so many and such powerful reasons for rejecting the treatment of fractures of the lower extremities by the half bent position of the different parts of the limb, and for preferring the situation parallel to the axis of the body, the former is generally adopted by the English surgeons. This is a first imperfection in their manner of treating fractures of the inferior limb. For fractures of the thigh in particular, they add still more to the inconveniencies already so great, which I object to the half bent position, by keeping the thigh bent directly upon the pelvis, the fractured limb not resting immediately upon the bed of the patient, and he himself lying upon his back. I will not be positive

that this method of employing the half bent position for fractures of the inferior extremity, and particularly of the thigh, is absolutely followed by all the English surgeons, nor even that it is sanctioned in all the hospitals of London; but in several of these hospitals, I have seen patients to which it has been applied, and they shewed me also a small mechanical apparatus, simple enough indeed in its structure, by means of which, the whole lower limb is, as it were, suspended, and removed from the plane on which the body of the patient rests, the leg being bent directly upon the thigh, and the thigh upon the pelvis. This apparatus is, at the same time, intended to retain the broken ends of the bone in a situation favourable for their consolidation. It consists of an assemblage of hollowed splints, forming together a large and long trough, broken in the point, which is to correspond with the ham: the two parts thus joined by hinges, have a common support, by means of which, they are kept inclined one towards the other at an angle, more or less considerable, whilst, at the same time, this support gives a suitable stability to the whole apparatus. When I asserted, that in a fracture of the thigh, to keep this part of the limb bent directly towards the pelvis, and the whole limb, as it were, suspended, was adding to the inconveniences of the half bent position, I advanced a thing which proves itself. Is it not evident, in fact, that if it is done in one of

those oblique fractures, in which there is so great a disposition to the broken ends riding one over the other, the weight itself of the inferior portion is favourable to this riding: this does not take place in the horizontal position, either if the thigh be extended, or even if it be half bent, the whole limb resting on the external side.

Our apparatus for fractures of the lower limbs correct, or would correct, to a certain degree, the inconveniences attending the half bent position of the limb. Those employed by the English surgeons, on the contrary, only add to them, and are one more imperfection in their manner of treating fractures. They employ a roller (bandage roulé), above which, they immediately apply hollowed splints, modelled to the shape of the limb. But these splints, with whatever care they are made (and I confess there is nothing to find fault with in that respect), can never be so perfectly fitted to the shape of the limb, that it may be subjected to a pressure nearly equal on every part of its surface. On the other hand, the roller, as well as the eighteen-tail bandage, and the bandage with detached straps, called *Scultet's Bandage*, relaxes: like these last, it is only of use, when applied frequently: but whilst the bandage of Scultet, and even the eighteen-tail bandage, so defective in other respects, can be easily re-applied without moving the fractured limb, the roller cannot be removed and applied without

lifting up the limb, and giving some motion to the broken ends, which, however slight they may be, are very prejudicial to the process of consolidation. It appears, that to avoid this inconvenience, the English surgeons very seldom renew the applications in the treatment of fractures, and they sometimes scarcely examine the limb at all during all the time necessary for the formation of the callus. But it must result from this negligence, that the limb is not well kept in its position: the broken parts must, in some measure, be moveable one on the other, and for that very reason be disposed to yield to all the causes which may displace them. I believe, in consequence of these circumstances, that the English surgeons can very rarely obtain the cure of fractures of the lower limbs with the least possible deformity. It is probable that they very frequently meet with delayed consolidations. I suspect, in fine, that the *pseud-arthrosis*, that is to say, the conversion of a fracture into a false articulation, is an accident which they have much more frequent occasion to observe than ourselves. It is for us French surgeons, so rare a thing to see a false articulation succeed to a fracture, that, for several years, the operation of White has not been performed in France, that is to say, the resection of the fragments of a bone not consolidated; and for several years also, that a surgeon of Philadelphia, Physick, has conceived the ingenious idea of treating the pseud-

arthrosis, by the interposition and temporary abode of a seton between the two ends of the bone not consolidated for the purpose of exciting adhesive inflammation, this operation has not been practised, at least, to my knowledge, by any French surgeon.

If I may judge, on the contrary, by what I have observed during the short stay I made in London, this last operation, which the English surgeons justly prefer to the former, is sufficiently familiar to them; which supposes the tolerable frequency of false articulations. I was only a month in London, yet, during that time, an opportunity occurred to Mr. Charles Bell, of employing the method of Physick on a child who had a false articulation consecutive to a fracture of the leg: I was even witness to the operation. At the same time I saw in St. George's hospital a man on whom the operation had been performed on the thigh not more than three weeks before. It was the second time that Mr. Brodie, who is yet but a young surgeon, had performed it: he had operated for the first time a short time before, likewise for a false articulation of the thigh. Perhaps it may be thought that the English surgeons decide hastily upon this operation, that they practise it in cases of fracture, which are only not consolidated at the period when they ought to be, without being on that account converted definitively into false articulations, and when perhaps consolidation might be obtained by persist-

ing in the ordinary method of treating fractures. But that is not the case; it will soon be seen that in the case that came under my knowledge, where it was thought necessary to have recourse to this practice, it was indeed indicated, because there was really a false articulation. And were it true, what I said might be supposed, which it is not, on the contrary, it would still remain certain, that the delayed consolidation of fractures is a more common event in the practice of the English surgeons than of our own.

The patient on which I saw the operation of Physick practised by Mr. Charles Bell, for a false articulation of the leg, was a little boy of six years old: the false articulation had existed three years. The fracture had been oblique, and without any real riding of the two portions of the tibia, one over the other, the inferior one nevertheless made a slight projection before the superior. The correspondence of the portions of the fibula could not be perceived: I think I can recollect one circumstance, which is that in the early part of the accident, the child had been treated for a simple contusion: some unskilful surgeon mistook the case, and the fracture was left to itself. If that is correct, we must take off this case from the number of those which would tend to demonstrate the imperfection of the method of the English surgeons in the treatment of fractures. Mr. Bell only passed a seton

between the two fragments of the tibia: for that purpose he made first, in the skin and subjacent parts, a very small incision outside the false articulation; he then passed the seton between the fragments, by means of a very strong needle, very little curved, having a long stem mounted on a handle, and its eye pierced near the point; a needle, indeed which differed from that of M. Deschamps for the operation of aneurism, only in having the curvature, which was less than in this latter, in the course of the stem. The skin and other parts on the interior side of the false joint, were perforated by this instrument from within outwards. The body inserted between the fragments, and intended to excite by its presence adhesive inflammation, was a skain composed of fifteen or twenty threads of silk. This skain was only of sufficient length for its extremities to be fastened on the front of the leg: which shewed that it was not intended to be changed, that is to say, that a fresh portion could not be drawn through every day or every other day, as is done in the case of a seton. It ought at all events to be drawn backward and forward from time to time, in order to increase by the friction the irritation of the surfaces of the false articulation. Mr. Bell performed that operation during the latter part of my stay in London. I forgot to beg of him to inform me of the consequences, so that I cannot say whether the presence of the seton

produced any accident, or how long it was left between the broken portions of the Tibia; nor in fine, what were the final results of the operation.

I can, however, give a more detailed account of each of the two cases in which the same operation was performed by Mr. Brodie at St. George's hospital. It was in both cases for a false articulation of the thigh. The following is the history of the first, as it has been communicated to me by Mr. Brodie.

A young lad from the country, twelve years of age, had both thighs fractured by the wheel of a carriage under which he fell. This accident took place on the 30th of December, 1812. On the left side, the fracture was double; nevertheless, the consolidation took place within the usual time. There was only one fracture on the right side; it was in the middle part of the thigh. Although treated in the same manner as the left thigh, it did not coalesce. The boy had been confined to bed, until he was brought to St. George's Hospital on the 2d of June, 1813, exactly five months after the accident. At this time, the limb was a very little shorter than the other: the superior end of the fractured bone was in front of the inferior: there was a great degree of motion between the two fragments. In every other respect, the youth enjoyed excellent health. Mr. Brodie considered the false articulation as definitively established, and decided on attempting

its cure by the interposition of a seton between the broken ends of the bones.

The operation was performed the 14th of June, and very nearly in the same manner as I had seen it performed by Mr. Bell. By means of a longitudinal incision made in the interior of the thigh, in the point corresponding to the fracture, a long seton needle was passed between the two ends of the bone, drawing after it a skain of waxed silk. The instrument, which was drawn out by the external part of the thigh, after having passed through the flesh from within outwards, had slipped easily between the contiguous surfaces of the two fragments of the femur. I did not even meet, says Mr. Brodie, whose case I translate literally, the resistance which a soft substance would have been able to oppose, had it been formed between the fragments; which convinced me, that a false joint was perfectly formed.

After the operation, a tolerably sharp pain seized the limb, which, however, only lasted a few hours. The consecutive inflammation was not very considerable. The patient remained in bed, having his limb extended only on a mattress, until the 25th of July, at which period, splints were applied to the sides of the limb: at that time also, the patient began to walk with crutches.

There is, perhaps, here, in the case which I am translating, an error of date; but whether such an

error exists or not, Mr. Brodie appears to me to have committed a serious fault, which I cannot help remarking. If I had faithfully translated this last passage, I should have said, that it was the 25th of June, only eleven days after the introduction of the seton, when splints having been applied to the limb, the patient began to walk with crutches; but I thought that Mr. Brodie meant to say the 25th of July. In fact, I conceive, that at the utmost, the limb might have remained till this period without being supported by splints; I do not, on the contrary, conceive, that only eleven days after the introduction of a seton between the surfaces of a false joint of the thigh, that a patient could be permitted to get up, and walk about even with crutches. If it were not, as I am of opinion, till the 25th of July, that is to say, nearly six weeks after the operation, that the patient began to get out of bed, at the same time that splints were applied to the limb; why was it delayed till that period, to have recourse to the application of an apparatus intended to keep the limb in a state of perfect immobility, in concurrence with the presence of the seton?

Be it as it will, a month after the operation, the union of the two fragments of the thigh had already commenced. On the 2d of August, it was still more advanced; the bandage was left in its place, and on the 10th of the same month, the little patient was able to walk with only one crutch,

resting even the foot of the diseased limb on the ground.

However, on the 30th of August, there came on in the same limb, an erysipelas, which spread from the vicinity of the wounds through which the seton passed, and extended itself over a great part of the leg and thigh. It was then only that the seton was withdrawn: it was necessary again to confine the patient to bed, whom this erysipelas had weakened to such a degree, that he was not able to walk during the time he remained afterwards in the hospital. He went out on the 20th of September. He was sent into the country, hoping that the good air would contribute to his speedy re-establishment. At this period, however, the false joint no longer existed; the two ends of the bone were united, but not yet with so much solidity as they might have been, or as they were in the end. It appeared, that the intermediate substance, by means of which their union was effected, was not yet completely ossified.

From the moment he ceased to be under the care of Mr. Brodie, this young patient was attended and carefully observed by Mr. Lucas, a well-informed young surgeon, who had witnessed the operation in St. George's Hospital, where he was then a student, and who transmitted the following details to Mr. Brodie. After a short residence in the country, the patient was able to walk very well; but the state of debility into which his last disease

had thrown him, and still more the fear he had of falling, prevented him from hazarding himself to walk without the assistance of a stick so soon as he might have done. During the following winter, which was extremely severe, this youth was attacked with a most violent rheumatism, which confined him a very long time to his bed, and gave rise to a permanent retraction of the lower extremities.

The last communications made to Mr. Brodie by Mr. Lucas, on the situation of this youth, and by which Mr. Brodie concludes his case which he sent me, are of the month of July last year (1814). At this period, the retraction of the lower extremities rendered the patient impotent; but not the least movement could be distinguished where the fracture had existed: the thigh was perfectly consolidated.

The person who was the subject of the above case, was a lad of twelve years old. At this age, no more than six weeks are required for a fracture of the femur to become consolidated; and since, as it happened here, six months were elapsed since the accident, when Mr. Brodie judged it convenient to pass a seton between the broken ends, I believe that there really existed a pseud-arthrosis. But if the subject had been an adult, I should have said that Mr. Brodie was hasty with the operation. In an adult subject, a fracture which is not consolidated after five or six months, is not definitively converted into a false articulation; nature can still effectually

operate the formation of callus, without any other assistance from art, than a prolonged application of the ordinary retaining apparatus, or of that for continual extension. This is demonstrated by a great number of facts. I shall here relate one that I have lately collected.

A man belonging to the Police, in the vigour of life, and of a constitution almost athletic, had the left thigh fractured in the month of February last. The fracture was rather oblique, and was situate in the middle of the thigh. This man was under the care of two well-informed surgeons; I was myself desired to see him, and I assisted three or four times at the re-application of the splints, &c. during the two months, or two months and a half, that he was subjected to the ordinary treatment for fractures of the thigh. I took notice of one circumstance; which was, that from the earliest period of the fracture, although the bandage of Scultet was extended nearly to the ancle, the leg and knee became the seat of an œdematous swelling, accompanied with a livid colour of the skin. This swelling continued till the period when the process of consolidation was beginning: it belonged, without doubt, to the same cause which rendered this consolidation so tardy: this was another visible effect of the extreme debility with which the limb was struck accidentally. After two months and a half of methodic treatment, nature had not yet done

any thing towards the consolidation of the femur: the fragments were almost as moveable one over the other, as they could have been at the first moment of the fracture. I was of opinion that it would be proper to have recourse to the application of the apparatus for continual extension, in order to remedy the slight riding of the fragments, and to retain the limb in a perfect state of immobility. In order to be better able to direct the employment of these means, I had the patient removed to the Hospital of the Charité. I put on him the extensive machine of M. Boyer, which we frequently use, and with much success. I even took the precaution to apply previously a roller over the whole limb, and to strengthen the thigh with pasteboards. Two months more elapsed, after which, the process of consolidation had made no more progress. We did not, however, despair of obtaining this consolidation. The machine for continual extension was applied afresh, as well as the roller, with pasteboard splints upon the thigh; and we endeavoured to second their effect by the internal use of tonics, and the assistance of as substantial a diet as can be had in hospitals. The patient, who complied with our directions with extreme docility, obtained from them the happiest results. The callus began to form, it gained imperceptibly greater consistence; and I was able, at the end of the sixth month, to discontinue the use of the apparatus for continual extension;

but the patient remained sometime longer in bed. For this month past he has got up, and walks about with crutches. The motions of the knee-joint are not yet restored; the fractured limb is not shorter than the other by more than about half an inch; and, in the thigh, there is no deformity but what arises from a slight projection which is made anteriorly and exteriorly by the end of the superior fragment.

But I will return to the second case, in which Mr. Brodie performed the operation by seton for a false articulation of the thigh. I saw the patient in St. George's Hospital. The following are the details which Mr. Brodie communicated to me by letter, bearing date the 11th of March last. It was a man of thirty-four years of age: he had the left thigh fractured in the month of August 1813, but did not come into St. George's Hospital till the month of July 1814, almost a year after the accident. The fracture was converted into a false joint. A seton, that is to say, a skain of silk, was introduced once between the surfaces of this false joint, on the 15th of July: this was obliged to be withdrawn a fortnight after, as its presence occasioned too copious a suppuration, attended with some general symptoms which excited alarm. A short time after the skain was withdrawn, the suppuration diminished, the wounds began to cicatrize, and it was thought that there was a beginning of the union

of the broken bone. The limb was then surrounded by splints; but instead of the thigh becoming more and more consolidated, the whole process of reunion between the surfaces of the portions of bone ceased, so that at the end of six weeks they were more moveable than before withdrawing the seton. The same means were had recourse to a second time; a fresh seton was introduced on the fourth of October. It had not been withdrawn five months afterwards, in the month of March last, when Mr. Brodie wrote me an account of the state of this patient: the thickness of the skain had only been gradually diminished, and reduced to a few threads. At this moment, that I am writing to you, says Mr. Brodie, the limb is much more solid than it was before the second introduction of the seton: it appears clearly that a new substance is formed between the fragments of the femur; but there is still a motion in the false joint, and it is evident that a true callus is not yet formed. Even now, adds Mr. Brodie, I begin to despair of obtaining a perfect cure of this false joint. Mr. Brodie was to have informed me of the ultimate results of this operation; but circumstances have for a time interrupted the correspondence that I had established with him and other surgeons of London.

The reduction properly so called, I have before observed, is but a point in the treatment of fractures: the essential parts of this treatment are, the almost

daily attentions which a fracture demands during the whole time necessary for its consolidation. The contrary of this is the case in luxations. There, indeed, the reduction is every thing: we may reckon amongst the number of rare cases in surgery, those in which a luxation is complicated, or accompanied with circumstances of such importance as to render necessary any degree of consecutive attention: and then, indeed, these attentions are directed less to the luxation, itself, than to the extraordinary accidents or circumstances with which it may be complicated.

Since the surgical proceedings in luxations, relate almost entirely to one circumstance, the reduction, properly so called, it would seem that the practice of different surgeons would present here less variety, and would be more uniform than in the treatment of fractures. That is in reality the case. We may remark also, that all surgeons have recognized the importance of a complete system of luxations; and that by a system of luxations may be understood the precise determination of the different luxations of which any particular joint is susceptible, of the mechanism by which each of them is produced, of the new relations which in each of them also, the luxated bone has contracted with the other parts of the joint which it concurs in forming, or with the neighbouring parts; in fine, of the particular signs of each luxation.

Without too much pride, the French surgeons may lay claim to the glory of having, in a remarkable manner, extended and brought to perfection this system of luxations, and of reducing to the utmost degree of simplicity the process of reduction. It must be granted in favour of the English surgeons, that they have shewn themselves more enterprizing than ourselves, in certain very complicated luxations, which some of the joints are susceptible of, particularly that of the elbow and of the foot. These luxations are sometimes complicated with an opening of the articulation, and the passage of one of the bones through the wound of the soft parts. It is not sufficient, in cases of this kind, to enlarge the wound of the soft parts; even with this precaution, the reduction is often impossible. We can only then prevent more formidable accidents, or put an end to those already produced, by sawing off the denuded portion of the bone which projects through the wound. In attempts of this kind, the practice of the English surgeons seems to have been more fruitful than our own. We are able to produce cases in which, after the example of Fabricius de Hilden, Ferrand, Desault, Laumonier, and several other French surgeons, have completely extracted the astragalus, in luxations of the foot, complicated with the protrusion of this bone, through a wound of the articulation, and of its separation from the os sca-

phoides: but beside that similar facts are also to be found in the annals of English surgery, it is there that we must seek for the first instances of the sawing off the inferior extremity of the humerus, of the inferior extremity of the radius, of the inferior extremity of the tibia, or of the tibia and fibula both together, in cases of luxations of the elbow backwards, of the wrist, and of the foot.

The latter of these operations, particularly that of a part of the tibia only, or of the tibia and fibula, and which, as far as I know, has been performed in France only by M. Deschamps, three or four years ago, has been already practised several times by the English surgeons. At the moment of my arrival in London last year, Mr. Cooper had just performed it at Guy's hospital, in a case of luxation of the foot, complicated with a fracture of the inferior part of the fibula, and the protrusion of the inferior extremity of the tibia in the anterior part of the articulation. This inferior end of the tibia was sawed off. A fortnight had already elapsed since the operation, which had been performed immediately after the accident, when I saw the patient for the first time. It was a young man of seventeen or eighteen years old: he had gone through the period of inflammatory symptoms, which had been very moderate. When I last saw him, the danger was all over.

Several similar facts are related in an English

work which I have contemplated with the greatest interest, and which I should be sorry not to have known: it is the work of Mr. Hey, the old fellow-student and friend of Benjamin Bell, whom he has survived, a respectable old practitioner, who, in the decline of his career, and after more than thirty years of practice in the General Infirmary of Leeds, one of the most considerable hospitals in England, has given to the world the fruits of his experience in a simple collection of observations.*

This work contains a multitude of precious facts, stamped with the mark of the soundest surgery.

The operation has been attended with success, in the greatest number of cases, where either the sawing off the inferior extremity of the bone of the leg, or the removal of a part or of the whole of the astragalus has been practised, in complicated luxations of the foot, which seemed to leave no resource but amputation of the leg. Is it because by this retrenchment of the astragalus in whole or in part, or of the inferior extremity of the tibia, the soft parts about the joint of the foot, are put into a state of relaxation, or rather of laxity, which prevents the excess of the inflammatory symptoms? Does it happen also, that by the removal of one of these osseous parts, the articular surfaces are

* Practical Observations in Surgery, by William Hey.

reduced to less dimensions, the exposition of which surfaces to the contact of the air, and the irritation they undergo, are the principal cause of the serious character of penetrating wounds of the joints?

It is in the same work of Mr. Hey, which I have just mentioned, that are found the first facts which have served for the foundation of the doctrine of the English surgeons concerning the *fungus hæmatodes:* it is Mr. Hey himself who has introduced into surgical language this expression, which we have adopted, but by turning from the sense which he attached to it, and making, in my opinion, a more just application of it, than that of the English surgeons. We were of opinion that they used these words to designate, and to designate exclusively those kinds of tumors, which for a long time we have named, *fungous sanguineous tumors,* (fonguenses sanguines): and in fact these two denominations appear to be a translation one of the other. It is consequently in the sense of fungous sanguineous tumor, and as it were a synonyme of that name, that the term *fungus hæmatodes* has been employed in the works of surgical pathology that have been lately published in France. I have so employed it myself in my *Nouveaux Elemens de Mèdècine Operatoire,* in the article relating to operations for aneurisms, having been led to say something on the disease which we call *fungous sanguineous tumor,* which I have designated indiffer-

ently by this denomination, and that of *fungus hæmatodes.* I did not know that the English surgeons considered the *fungus hæmatodes* as a disease of a peculiar kind, the character of which, they maintain, has been hitherto not well determined, and which has been principally confounded with cancer, whilst, although it has some traits of resemblance with this latter affection, yet it differs from it essentially, and requires to be distinguished.

Already during my stay in London, the opportunity presented itself of discovering that we were mistaken in supposing that the English surgeons gave the name of *fungus hæmatodes*, only to what we call *fungous sanguineous tumor.* I saw, at Guy's Hospital, an operation performed by Mr. Cooper, for sarcocele; the tumor, which was neither very small, nor of extraordinary bulk, was examined in my presence after the operation. I saw in it one of those sarcoceles of the testicle itself, in which the substance of this organ, which was degenerated, and become scarcely distinguishable, is covered with a softish texture, distended by a great quantity of a fluid which is sanious and sanguinolent, a circumstance which often enough occurs. It is, said Mr. Cooper, a *fungus hæmatodes.* I was so much surprised at hearing, for the first time, this denomination applied to what appeared to me a true cancer of the testicle, that at the moment, I abstained from all observation. One day that I com-

municated my reflections on this subject to Mr. Young, another surgeon of London, very well informed, with whom I had almost daily communications, and whose courtesy I cannot too much acknowledge, he proposed to shew me a patient whom he was attending. This patient, according to Mr. Young's account, was in a situation which would justify, in my eyes, the opinion of the English surgeons respecting the *fungus hæmatodes*, and convinces me of the existence of this affection as a particular disease. I saw him: he had on the left side of the base of the chest a bulky tumor, with a large base, irregularly circumscribed, and adhering to the parts on which it was situated; the surface of this tumor was uneven; the teguments which covered it were livid, thin, and disposed to break in several points, especially on the surface of the projections, where the tumor was soft, and, as it were, fluctuating, whilst elsewhere it was hard and resisting: these, without doubt, would have formed in a short time ulcers, and fungous vegetations, if the patient had survived any time. But at the moment I saw him he was in the utmost degree of exhaustion and marasmus: he must have died very soon after. His disease was a cancerous tumor, most completely characterized.

Since my return from London I have read and read again, I have meditated with all the attention of which I am capable, the cases collected by Mr.

Hey, under the title of *fungus hæmatodes*, and am convinced, that his doctrine, although well received, and professed by all the English surgeons, does not rest on any solid basis. The affection, of which Mr. Hey relates a number of instances, that which he appears to consider, and which other English surgeons appear also to consider, as the *fungus hæmatodes* most clearly marked, as being, if I may be allowed the expression, the type of this disease, is nothing but a variety of cancer: it is the cancer which we denominate the soft, fungous cancer, remarkable for its rapid progress, for the softness of the affected texture, for the ready formation of ulcers on the surface of the tumor, for the facility with which these ulcers become covered with fungous excrescences, with a sort of mushrooms of a livid colour, and the surface of which discharges a greater or less quantity of blood. The cancer, preceded by the scirrhous state, is the only one which the English surgeons consider as true cancer: it is that only which they wish to have called by that name. But nothing distinguishes essentially these two affections; they are two principal modes of existence of one and the same pathological state, capable of many variations. Like the cancer, properly so called, that is to say, like the affection for which the English surgeons wish to reserve exclusively the denomination of cancer, the *fungus hæmatodes*, although capable of making its appear-

ance in many different parts of the body, it yet affects in preference, as they themselves assert, certain organs, as the eye, the breast, the testicle, &c. Like cancer, the *fungus hæmatodes*, when once formed, extends and propagates itself, and continues to make an uninterrupted progress, until the tumor, under which form it exists, be removed, if indeed its removal be practicable. Ulcerations form spontaneously on the surface of the *fungus hæmatodes*, as on that of a carcinomatous tumor. Lancinating pains, which go on increasing in violence, are a constant, or almost constant symptom in both affections. There is the same tendency, the same disposition in the *fungus hæmatodes* to reappear, either in the same part which has been its primitive state, after having been removed, and when every precaution has been taken to exterminate every vestige of it, or in parts more or less distant from that. Lastly, in the *fungus hæmatodes*, as in cancer, properly so called, or as in every kind of cancerous affection, there is shortly added to the local affection, a general state of the system, a peculiar diathesis, which brings on, sooner or later, emaciation and death. This diathesis is not the effect of the local affection, as has been asserted; it cannot be compared, as I have done at a time when I was not yet informed by experience, and at a period of life when it is so difficult to be on our guard against the wanderings of the imagi-

nation, this cancerous affection, I say, cannot be compared to the simple cachexia to which other organic affections give rise. Every thing inclines us to believe that it is immediately produced by an internal disease, which, having acted at first on a determinate part of the body, makes, if we may so express it, a general explosion, and exerts on the whole system, an influence which is sometimes restrained and curbed by the removal of the local affection to which the internal disease has given rise, but which, much more frequently, on the contrary, gains from this circumstance an increase of energy and activity.

Again, if Mr. Hey had included, under the name of *fungus hæmatodes*, only such cases as relate to one of the varieties of cancerous affection, I should find nothing to blame but the adoption of a new word to designate a well-known disease. But amongst the cases of a disease, evidently of a cancerous nature, you find some which appear to have some relation to fungous tumors of the periosteum, and even to simple white swellings of the joints, only accompanied with some peculiar circumstances. There are also, but in very small number, some instances of true *fungus hæmatodes*, that is to say, *fungus hæmatodes* not cancerous, or simple fungous sanguineous tumors. Nevertheless the English surgeons distinguish this latter affection from *fungus hæmatodes*, as a peculiar disease; at least they

intend to do so by considering the *fungus hæmatodes* as a special disease, differing, both from cancers, properly so called, and from sanguineous fungous tumors, to which they have given the name of aneurism by anastomosis: they have more especially given it to such of the sanguineous fungous tumors as are the best understood as to their nature, the most simple in their character, and more particularly to those which have for their origin some of those marks of the skin known by the name of *nævi materni*. Thus, then, it is not on these simple cases of fungous sanguineous tumors that Mr. Hey has bestowed the title of *fungus hæmatodes*. In all the cases he has given, the disease shews itself with a certain character of malignity: it is more particularly remarkable for the kind of fury with which it breaks out afresh, after the removal of it has been affected for the first time, or has been repeatedly attempted. Such indeed is the character of certain fungous sanguineous tumors.

The greatest degree of latitude, the greatest uncertainty reigns then in these views, of this doctrine of Mr. Hey, with respect to the *fungus hæmatodes*. Certain varieties of cancer, fungous sanguineous tumors, and white swellings of the joints, have been wrested from each of the different genera of affections to which they belong, and have been forced to resemble one another, and to compose a particular genus of disease: they are so many individuals be-

longing to several different families, of which it has been attempted to compose one family. Such ideas, in my estimation, disparage the work, so commendable in other respects, in which they have been given for the first time: they rest on no solid basis, and are of no practical utility. I doubt if ever we shall give them our assent. If we preserve in our language of surgery the term *fungus hæmatodes*, it must be, as we have hitherto used it, to designate the fungous sanguineous tumors, and as synonymous with this latter denomination.

I shall cease for a moment from discoursing on the doctrine and practice of English surgeons, in order to deliver a few remarks on the fungous, sanguineous tumors, or the true *fungus hæmatodes*. I am not fully satisfied with any of the descriptions hitherto given of this disease; it is a point in surgery on which the observations have not yet been sufficiently multiplied, nor sufficiently well compared one with the other. In particular, there is nothing less well established than what relates to the treatment of this disease. In what cases can a fungous sanguineous tumor be for a time left to itself, without fear of seeing it make too rapid and considerable a progress? When the development of the disease is already very great, or the certainty of its further progress induces us to attempt the cure, what is the most suitable mode of treatment with regard to the age of the patient, to the seat of the disease on one

or other part of the body, to the degree of development to which it has arrived, with regard likewise to the character under which it presents itself in each case in particular? For the fungous sanguineous tumors are far from being a disease always similar; there are, on the contrary, several sorts of them: they shew themselves under several varieties. In what cases can a permanent compression of the tumor itself be employed with some hopes of success? When ought we to prefer, to this compression, the removal, the entire eradication of the tumor? In what circumstances, assimilating to a certain point, a fungous sanguineous tumor to an aneurism, could we, as for it, practise above the tumor, the ligature of the artery, the ramifications of which are the seat of the disease? In what cases is amputation, not of the tumor only, but of the part itself where it is situated, the only resource of surgery? Lastly, in what cases ought art to remain an idle spectator of the evil, and acknowledge its inadequacy to prevent the fatal consequences? These are so many questions, for the solutions of which experience has as yet furnished but few data.

I had already observed, and I have just repeated it, that the fungous sanguineous tumors are of several kinds. The disease to which we have given the name of Pott's Aneurism, is one of the first varieties, and its mode of formation appears to be

as follows. An artery of a middle size, sometimes one only, or several arteries of a smaller size, become dilated to a great extent. Their coats, at the same time, undergo an alteration, a disorganization, the nature of which is not known. These coats, of one or of several arteries, dilated and disorganized, are perforated by a number of small openings; they become like a sieve, and thus are permeable to the blood. But this fluid only oozes slowly through several points; and instead of being effused into one cavity, or cyst, as takes place in the false consecutive aneurism, it filters into the cellular texture, and even into the texture of the flesh: by its presence, perhaps also by some particular alteration that it undergoes, it changes the nature of these parts, converts them to a greater or less extent, into a spongy mass, from which it can only be expressed slowly when the skin, which covers the tumor, has burst, or has been divided. What Pott observed twice in the leg, has been since seen by other surgeons in several different parts of the body.

All the other sanguineous fungous tumors begin by the uniform dilatation of the capillary vessels, as well arteries as veins, in some part, a dilatation which, in proportion as it goes on to a still higher degree, extends by successive approaches to the small arteries or veins, from which the capillary vessels proceed, and to branches still more consi-

derable. It is always, or almost always, in the capillary vessels of the subcutaneous cellular texture, that this dilatation begins; it is here that the fungous sanguineous tumors, in question, are situated; its laxity, and the considerable number of vessels with which it is penetrated, are favourable to the formation of this pathological state. With respect to the share which each of the two orders of blood vessels may have in the production and progress of the disease, it is to be observed, that there cannot be in any fungous sanguineous tumor, a dilatation of the capillary arteries, without a dilatation of the veins: some, on the contrary, appear to consist in an extraordinary development of the veins, whilst the arteries have not experienced any dilatation. For these only the name of varicose tumors ought to be reserved, which we give indistinctly to all the fungous sanguineous tumors. Most commonly both orders of vessels are affected at the same time: but the dilatation of the one is not, in all cases, proportioned to that of the other; that is to say, that the capillary arteries and veins, and subsequently the more considerable branches from which they proceed, are not always affected to the same degree, they do not equally concur in the production of the tumor: there are some of these fungous sanguineous tumors, which are more arterial than venous, or which partake more of the aneurismal than of the varicose state: there are, on the

other hand, those which are more venous than arterial, or more varicose than aneurismal.

The fungous sanguineous tumors, simply varicose, that is to say, produced exclusively by the dilatation of the veins, although much less common than those, to the production of which the veins and arteries both concur, are, nevertheless, not very rare. I have very recently met with two, in two different subjects, both remarkable for the long time since which they had been stationary. One of these occupied the whole palm of the right hand, including the five fingers. This tumor, which was more extensive than prominent, was extremely soft, and altogether indolent: its surface was livid: it increased in size when the arm was pendant, and motionless by the side of the body; and diminished on raising the limb: it was made to disappear altogether on compressing it, and the skin remained flaccid. The woman, who was the subject of this complaint, and which to her was only a trifling inconvenience, was about the middle age. She knew that it had commenced in her infancy, and assured me that, for many years, it had made no progress whatever.

The other case is still more remarkable.—A young man, about two and twenty, was born with two small spots on the skin; one about the middle of the left side of the forehead, and the other on the middle of the upper eyelid, on the same side.

These spots were livid and blackish, and not red or pink, as they generally are; and as are also those congenital marks on the skin, which dispose to fungous sanguineous tumors. A small varicose tumor, becoming developed at the spot on the forehead, during the infancy of this young man, it was amputated; but the disease was reproduced at the Cicatrix, at the same time that a varicose enlargement took place of all the superficial veins on that side of the face. The disease I speak of on the forehead, is certainly merely varicose; it is very soft, easily emptied on compression, and about the size of a small egg, but more or less prominent, according to the state of the man's respiration, the temperature of the atmosphere, &c. After having exhausted the tumor by compression, one could feel the surface of the cranium rough and unequal. Besides this tumor there is a slightly varicose state of the left upper eyelid; all the left cheek is puffy; and on the internal surface of the upper lip, and on the left side only, just under the mucous membrane, is a very distinct varicose tumor, but not very prominent. For the rest, this affection has been stationary a very considerable time, and there is every appearance that it will remain so indefinitely.

In some cases, these fungous sanguineous tumors are formed without being preceded by any perceptible alteration in the texture of the skin, and they

in general succeed to one of those spots which infants are born with. I shall speak more particularly of such, as they are most common, and are what have most frequently come under my observation; and I fancy that I have discovered in their development, their progress, and in some of the means employed for the cure, particularities, which are not unknown to other practitioners perhaps, but which, certainly, are not sufficiently dwelt upon in the descriptions which have been given of bloody fungous tumors, or this species of *fungus hæmatodes*.

All the marks, prominent or not prominent; all the congenital alterations in the texture of the skin, which we call generally by the name of *nævi materni*, do not dispose to fungous excrescences; and of those which do, it suffices to have observed one of them only with attention, to be able to distinguish, on all occasions, and predict with certainty the consequences, even when there does not yet exist any sanguineous tumor. Although irregularly circumscribed, yet the edges are no less marked than the middle, and the adjoining integument is perfectly healthy. These spots exist with none, or very little elevation of the skin; the texture of it is simply more soft and less elastic than other parts; the temperature is a little higher, without doubt, from the greater quantity of blood, as they result essentially from undue development, and

unnatural dilatation, of a certain number of capillary vessels. These spots are of a red colour, not like the blush on the cheeks, but more vivid, and in which some parts are deeper coloured than others; and this is the aspect under which those congenital spots shew themselves, which one may consider as the first stage of varicose tumors.

It is almost always on the superior parts of the body, and especially the head, that these spots exist. One may connect this circumstance with another fact more general still, which is, that other malconformations. of which some (and especially those confined to the skin) have rather the character of organic affections, are more frequent in the superior than the inferior parts of the body. Without pretending that the spots I have spoken of, never do exist on the abdomen, or inferior members, I can only say, that I have never yet observed any on those parts.

Suppose an infant, born with one of the spots of which I have attempted to give a description, the development of a bloody fungous tumor, in the subjacent cellular tissue, is inevitable, unless we efface the spot by permanent compression, continued for a greater or less period of time, and take off that portion of the integument which is the seat of the disease. A remarkable thing is, that at whatever time of life this tumor begins to develope itself, the spot on the skin scarcely changes its ap-

pearance; if it seem to increase a little, it is less by a real progress of its organic state than by an extension of the skin, which, in effect, being raised and distended by the tumor becomes thinner; the tumor must have acquired a very considerable development before the skin changes around the spot, and it then takes on a livid appearance.

One may say, without doubt, that the greater activity of the circulation after birth, and the different quality of the blood after respiration is established, determine to the formation of these tumors from *nævi materni*, and it is almost always in the early periods of life that they begin to form; the greatest number I have seen have been on infants a few months old, and this accords with what has been observed by others. I think too they are more common on girls than boys.

When these tumors do not make their appearance in infancy, the period of puberty is most favourable to their development; and at this period they make a much more rapid progress. One of the most curious cases of this description is related by M. Pelletan, in his Clinique Chirurgicale, of a young girl whom I had seen, before she was confided to the care of that excellent surgeon, under the care of M. Tartra. This girl was born with two vermilion coloured spots, one on the exterior surface of the edge of the left ear, the other on the parietal region of the same side. She was eleven

years old, and subject to those phenomena which announce the approach of menstruation, when this fungous change took place round and under the two spots, which, to this time, had remained stationary. The better to explain what occurred, I should say, that the vascular dilatation, hitherto confined to the spot, began to extend itself in the subjacent cellular tissue, increasing its ramifications further and further till it gained the temporal and occipital arteries of that side. This took place with frightful rapidity, and in two or three years the fungus comprised all the left ear, and corresponding half of the surface of the cranium. This tumor was remarkable, because, although elevated above the natural level of the parts, it was more extended than prominent, more diffused and less circumscribed than such kind of tumors generally are; I should add, that, on the whole, it was more aneurismal than varicose, and the pulsation over its whole extent was very sensible to the touch, and even to the sight. This explains the astonishing rapidity of its progress: this also was the cause, that before it had acquired any great development, the skin, which covered it, was become extremely thin and inclined to break; little cracks were produced by the slightest pressure, sometimes spontaneously, especially at the periods of menstruation. The patient was also subject to considerable hæmorrhages; it was even the frequency of these

hæmorrhages, and the fear that she should sink under them, which induced M. Pelletan to endeavour to arrest the progress of this fungous degeneration, by tying the temporal and occipital arteries as near as possible to their origin. Some hope was entertained of the success of this operation, from the ease with which the tumor was emptied, at the same time that the pulsation was entirely stopped by compression of the arteries. Perhaps the ligature of the trunk of the carotids on that side might have been more effectual, but all efforts of art were fruitless; the patient, indeed, by her own intemperance, opposed additional obstacles to the success of the care of the excellent practitioner to whom she was confided. She died at the end of a violent indigestion, a few days after the temporal artery had been tied.

It was at the period of puberty also, that was developed a fungous sanguineous tumor under a congenital skin spot, which, in a short time, acquired the size of one's fist, and which we amputated about four years ago at La Charité, on a girl about twenty years of age. The original vice of the skin (as the girl said) was the mark of a strawberry, which her mother had longed for during pregnancy. If this were the place to speak of that prejudice, respecting the imagination of the woman influencing the fœtus, I should certainly blame the vulgar credulity on that subject; but I

cannot help remarking, that there is no point of controversy which the moderns have treated in a more strange manner, or with a less philosophical spirit. We deny completely the influence of the mother's imagination on the fœtus; we search with avidity any other explanation of the facts which seem to establish its probability. We torment ourselves to give them another origin; lastly, the vulgar prejudice, which consecrates this idea, appears to us superlatively ridiculous, because we do not see, and cannot explain, the connexion of the cause and the effects; as if there were not in the animal economy a multitude of phenomena equally extraordinary, and in the explanation of which all the efforts of our intellect have been, and ever will be, futile. We have forgotten that, relative to the subject in question, there is a medium between boundless faith and blind credulity—philosophical doubt.

The tumor I speak of occupied the inferior and external part of the left arm; without being so moveable as an encysted tumor, it still appeared possible to remove it without injuring the muscles; it had acquired the size of a fist in about three years. On the middle of the free surface of the tumor, one could see the original spot which had been the origin of it. In the middle of this spot, and indeed all over the tumor, the skin was livid, and reduced to a thin pellicle; already there ap-

peared several small cracks, from which the blood oozed very abundantly. It was high time to undertake the amputation of the tumor, as its further progress would inevitably compel the amputation of the member. It is unnecessary to say how the operation was performed, but one circumstance of this operation, and some others which followed it, deserve to be known. The tumor being taken away, the muscles of the arm appeared absolutely untouched, and not affected by the disease; yet both venous and arterial blood ran in abundance from the whole surface of the wound. It was necessary to apply a great number of small ligatures, and use slight compression by the dressings: afterwards the inflammation was by no means so considerable as the extent of the wound would seem to have produced, and the true suppuration was never established, that is, the wound never furnished a thick and healthy pus; nor did it present that vermilion colour and granulated appearance, which we see in general in wounds with loss of substance, and whose cicatrization makes such rapid progress. This wound was always bloody, and particularly at the periods of menstruation. Nevertheless the cicatrix is completed; but one can hardly imagine the slowness with which nature proceeded in it, and it required many months of constant care to complete the cure. Nothing seemed to indicate, either in the cicatrix or surrounding parts, any probability

of a repetition of the fungous disease; the skin merely remained extremely thin and rather blue; it became gradually stronger. Is the cure radical? I believe so, but do not affirm it. The patient quitted the hospital soon after, and we have heard nothing of her since.

If these fungous sanguineous or varicose tumors consecutive on *nævi materni*, like others which have not been so preceded, were only to occur in adults, the practitioner would seldom be uncertain what course to pursue. An adult could always support the operation, and we should only have to decide which of them to prefer, in case the disease were not palpably incurable; but as it is principally infants who are affected by them, the disease becomes more serious, more complicated, and modifies very much the curative indication. This deserves to be explained.

If an infant were just born with a fungus hæmatodes, very small, prominent, and well circumscribed, or were he very young, one might and ought to amputate it immediately. I have several times (and always with success) removed such tumors from the summit of the head, the forehead, back part of the neck, or the shoulder. But if in a child of the same age the tumor should be already of considerable size; if it be more extended than prominent; if its base be large, irregularly circumscribed, and having roots under the skin, or deeper.

two things give rise to doubt as to the plan to be pursued. On the one hand, it is very true that such a tumor developed in the early period of life may make uninterrupted progress; it is even without example that such a disease should have a spontaneous cure; but it often happens, also, that after having acquired a certain degree of development it remains perfectly stationary to a considerably distant period.

On the other hand, even if one were certain beforehand that such a tumor having acquired a certain size, would continue to make fresh progress, it is not a sufficient reason for attempting the cure by any thing like an operation: far from it; such would be a very hazardous attempt, which success even could hardly justify. In effect, of all the operations applicable to these kind of tumors, the complete eradication is that which is most generally appropriate. This eradication, which does not appear to differ essentially from the amputation of other tumors, varies, nevertheless, in several respects. One cannot practise it indifferently on all young subjects, without exposing many of them to great danger, and even running great risk of destroying their lives. Let us suppose, for example, a tumor of considerable size, having a broad irregular base, projecting under the skin, and even more deeply still, with a number of roots; the amputation or extirpation of such a tumor

would constitute an operation, not only difficult for an experienced surgeon, but minute, delicate, and not to be soon terminated. While it was in progress, the infant would suffer great pain, and lose much blood, proportioned to the extent of the wound, since many dilated vessels would be cut, which arrive at, and arise from the part. The operation even being finished as successfully as we could desire, we should not be certain of preventing considerable hæmorrhages, which might have serious consequences. In general, therefore, it ought not to be performed in the early years, unless the tumor is very small, very limited, and can be easily taken away in a short time, with almost a certainty of not producing any considerable loss of blood.

May I be permitted to say, that the same motives which counter-indicate amputation on a young infant, also are objections to the operations. The severe and continued pain cannot be sustained with impunity; the younger the infant the greater the danger, and the pain, which is trifling to an adult, will destroy a child. For example, the operation of lithotomy has been practised on children of eighteen months: if it be as laborious as it sometimes is with adults, death is prompt, and I have no doubt is the inevitable result of the pain. In infancy, we cannot lose but a very small quantity of blood without danger; an hæmorrhage propor-

tionably severe in an infant and in an adult, will be of no consequence to the latter, but will be mortal to the former. Thus the pain and the hæmorrhage are serious objections to certain operations on young infants, when their diseases do not immediately compromise their existence.

In some cases where the operation would be attended with danger, permanent compression may be an useful resource to suspend the progress of, if not to cure the disease. What more remarkable instance can be quoted than that of which Mr. Boyer speaks in his Treatise on Surgical Pathology. A child of two years of age had a varicose tumor in the substance of the upper lip, which had succeeded a rose-coloured congenital spot; the disease existed under the nostrils and extended a little into the septum nasi. This disposition not admitting of complete extirpation, Mr. Boyer recommended to the mother to bathe the part with alum water, and compress it as often as possible, with the fore finger placed crossways under the nose. He attached no importance to this advice, and was far from expecting it would be of any use if the tumor were not disposed to remain stationary; nevertheless, the plan was pursued with all the ardour that maternal tenderness could inspire; she sometimes passed seven hours at a time in compressing the part without intermission, and the unexpected cure of the disease was the price of her care.

At the age of twelve Mr. Boyer saw her again, and it was at that time impossible to perceive any trace of the tumour.

I have often advised compression in similar cases, but cannot give the results. In one instance, however, where I was able to follow and observe the effects of the plan, I have made a remark which is capable of being applied under other circumstances. A little girl, with whose parents I am exceedingly intimate, now three years and a half old, was born with a red spot just under the left clavicle. I was then in Spain, and did not see her till my return to Paris. She was then three months old, and already there was a development of a bloody fungous tumour about the size of a nut, under the spot. The circumference was rather irregular, and the operation did not appear to me advisable on so young an infant. The disease left to itself, continued to make some progress, but slowly; fearing, however its increase, I had recourse to compression. She was six months old when we began, and it was not an easy matter; it was necessary to avoid compressing the chest too forcibly. We changed the apparatus several times; several little mechanical bandages were successively employed; the tumor became emptied under the pad, but presently it began to extend itself on the surface; its base increased, especially on the side of the shoulder, and at this part one

could distinguish very easily the pulsation of two small arteries just under the skin, which went into the tumor. It appeared as if by the compression the blood was forced back to these arterial branches. I judged, therefore, that the compression could not be sufficient, or continued long enough, and that it was more likely to hasten than prevent the progress of the disease: I therefore desisted; the tumor became presently as prominent, nearly, as before; but what was very remarkable, ceased to extend itself, and has made no progress since. She is now four years old, and the tumor appears rather to have diminished than augmented, and one can scarcely observe the pulsation.

If I may be permitted to draw a consequence from an insulated fact, that which here presents itself is, that for a fungous bloody tumor, as for an aneurism, compression is only useful when it is situated on some solid part, which serves as a point of support. It is necessary, also, that the compression be very considerable, and that it extend not only over the whole surface, but beyond it; and even, if possible, on the arterial branches which supply the tumor.

I will make only one more remark on the true fungus hæmatodes, as a consequence of nævi materni. Since these spots often do at some period produce such tumors, why not destroy them early, before they take on such a disposition? Why not convert

the whole portion of skin into an eschar, by the application of caustic? Why not remove it with the knife? in either case to attack it before the disease be developed. If the spot be favourably situated for compression, why not thus endeavour to bring back the skin to its natural state, and destroy the varicose principle? This last means, of which the result appears more uncertain than the others, has nevertheless succeeded to my wishes in the following case.

One of my children, a little girl four years and a half old, was born with such a spot on the right temple, immediately outside, and a little above the angle of the eyelids: it was about the size of one's thumb nail. As it was easy in such a place to apply compression, I did not wait for the development of a varicose tumor, but applied a mechanical bandage, with a pad over the spot, at the age of two months. It was often necessary to replace it, as the head increased in size; it was left on during the day, and removed at night, and was thus worn for three years without intermission. From this time the spot had disappeared as completely as I could expect, and so as to leave no apprehensions on my mind for the future. There remains only a light coloured bluish ring, the size of the original spot, in the middle of which the integument is become perfectly healthy.

Aneurism is a disease much more frequent in

England than in France: I mean aneurism of the arteries and *external*. Whatever be the reason of the fact (and one may explain it, I think, from the nature of the labours in which a great part of the population of England is engaged), certainly the English surgeons have been in favourable circumstances for perfecting the treatment of this disease, and they have profited by them. One cannot refuse them the credit of having done more in the course of the last and present century to the progress of the art than the French.

It is in the observations of Monro on Aneurism at the bend of the arm (observations which form part of the Memoirs of the Medical Society of Edinburgh), that we find the first exact description of the operation for aneurism by opening the sac. Since, then, the plan has been extended to others, where it did not appear likely to have been attended with success, it was necessary to modify the execution according to the situation and connexion of the different arteries, which might be the seat of the disease; but we have not gone out of the route traced by Monro; and if one had to practise the same operation in the present day, we should conform, in every point, to the rules laid down by that excellent surgeon.

Hunter did not invent the operation which bears his name, and which consists in tying the vessel at a distance, more or less considerable above the

tumor, without touching the tumor itself. He only drew it from the oblivion in which it had remained since the time of Anel, who first practised it for a false consecutive aneurism at the bend of the arm: but, attributing to the English surgeon all the merit of the invention, we are accustomed to call this method by his name, rather than by that of Anel; because Hunter, in reproducing it, applied it to popliteal aneurisms, which are so much more frequent than those at the bend of the arm; and that it is more useful in the former kind, because Hunter practised it often in a short space of time, and with success in almost every case; and because he has, in some measure, appropriated the plan to himself by praising it so highly.

Neither do we call it Dessault's method, although to him also belongs a part of the glory of having reproduced it, because, in the operation which he practised for popliteal aneurism, in tying that artery at its origin, he used a defective mode, and Hunter's has generally prevailed. Besides, how much were we not prejudiced against the operation itself? The English surgeons had already generally adopted it, while we were still preferring the opening of the sac. The operation of Anel or Hunter was not easily introduced among us; we attached little importance to the principle of it, nor expected from it much improvement in the mode of treating external aneurisms.

Nevertheless, this method, afterwards applied also to such cases as were equally adapted to the operation of opening the sac, such as those of the brachial artery, the crural artery at the middle of the thigh, has led to those bold attempts by which this branch of surgery seems to have arrived at perfection. The ligature of the external iliac in inguinal aneurism, the ligature of the axillary artery at its origin, or subclavian at its termination for aneurism in the axilla, the ligature of the trunk of the carotid between an aneurism of that part and the sternum, are only extensions of the same operation to other parts.

These last operations, and especially two—the external iliac and common carotid, belong to English surgery. If one may believe a fact, with which I became acquainted in London, and which is related in Mr. Hodgson's recent publication on Diseases of Arteries and Veins, with details, which seem to guarantee its authenticity, an English surgeon has tied the internal iliac for an aneurism of the ischiatic (one of the two branches by which the iliac terminates in the pelvis). The project of tying the subclavian where it passes over the first rib (which was proposed in our academy of surgery), the English surgeons have put in execution; they seem to think, that it might be tied within the scaleni muscles with some probability of success. They even go so far, but I hardly dare mention it,

as to speak of tying the arteria innominata, or common trunk of the carotids and subclavian of the right side.

All this implies great confidence in the resources of nature, for the re-establishment of the circulation of the blood after the suspension of it in the largest arteries, of which we can make the ligature; and, in effect, the English surgeons have it in the highest degree, much more than we have. This remark is the more curious, as there was a time when, like us, they were much behind-hand in this respect, and particularly timid in what concerned aneurisms. Already this operation had been many times practised in the ham with success in Italy, for popliteal aneurisms; while, in England, as in France, the amputation of the thigh was recommended as the only resource. Bromfield, about the time when these attempts were first made, exclaims against an operation of this kind, which he had seen performed, and thought it extravagant to tie any artery larger than the brachial.

Before I detail the manner in which the English surgeons use Hunter's method, and their application of it, where all the resources of surgery seemed useless; I must just comment on their nomenclature as compared with ours; it is nearly the same for those we call spontaneous aneurism, false primary or diffused aneurisms, and false consecutive or circum-

scribed; but, some other terms common to the two languages, with the difference only of pronunciation, have not exactly the same meaning. We have indifferently called "varice anevrismale," "anevrisme variqueux," "anevrisme par anastomose," that disease which is produced by opening a contiguous vein and artery by the same instrument, and thus establishing a communication between the two vessels, by which the vein becomes dilated. The English name it exclusively aneurismal varix; but there is another variety of this disease, rare, certainly; and we shall not find it mentioned in many of our modern works. It has, however, been attentively observed by Park of Liverpool, and Physick of Philadelphia, who each relate an instance of it. It is the case where, at the same time that the communication is made by opening the vein and artery, and the vein admits the arterial blood, there is also a true aneurism formed between the artery and vein, so that the vein does not communicate immediately with the artery, but by the aneurismal cyst. It is to this case exclusively, that English surgeons have appropriated the term varicose aneurism. Lastly, they understand by aneurism by Anastomisis, not any of those diseases which we class under the general title of aneurisms; but some of the bloody fungous tumors of the more benignant and best known species, and which we

termed varicose tumors, before we applied to them the name of fungus hæmatodes—those especially which succeed some congenital skin spots.

The English having less confidence than we have in the effect of compression and of topical applications, immediately have recourse to the ligature, and Hunter's method is that which is generally practised. They do not even admit that there may be cases where the operation of opening the sac is preferable; and what is singular, the very same motive which induces us to practise the latter, is the very reason they urge for the former. For example, suppose that near the spot where the opening of the artery communicates with the tumour, there should arise collateral arteries which might be useful for the re-establishment of the circulation. In Hunter's operation we sacrifice the origins and first branches of such arteries, if not their last ramifications. Suppose an aneurism of the crural artery, which although formed under the principal muscular artery, nevertheless covers its origin, it is clear that in tying the crural artery above the tumor we should deprive ourselves of this important resource for the re-establishment of the circulation. The hope of preserving that artery would induce *us* to prefer the mode of opening the sac to the operation of Hunter; and Scarpa himself, who is so great a partisan of the latter, and who seems to have composed his work solely for the purpose of

praising it, yet he himself makes the case I have mentioned an exception. The English surgeons, on the contrary, find that in this and similar cases, if we used the operation of opening the sac, the ligatures would be applied too near the orifice of the arteries which are to receive the blood in its collateral circulation, and that there would from that cause be danger of hæmorrhage afterwards, and the reason (rather specious) which they give for this is, that in such cases the blood being pushed with violence against the orifice of these arteries, when they turn off so near the ligature, the artery tied cannot be so completely, or so extensively obliterated, as if the distance between the collateral artery and the ligature were more considerable.

This, according to the English surgeons, the greater the distance between the ligature and secondary arteries, the less reason is there to fear hæmorrhage, at the moment when the ligatures cut the artery; and vice versa. It remains to be seen how far these conjectures are well founded, and whether the great advantage of preserving such principal resources for collateral circulation, does not outweigh the danger from consecutive hæmorrhage.

I would oppose the following fact to the opinion of the English surgeons, without, however deducing from it any absolute consequences: it is recent,

and analogous to some others that one might collect. Three months ago a man was brought to La Charité, almost at the moment he had received a stab with a knife in the fore part of the thigh, a little below the middle; the instrument had made a deep narrow wound; the crural artery was opened. Instead of endeavouring to discover it at the wound, for the purpose of placing one ligature immediately above, and another below the wound, I preferred tying it at some distance from the point at which it was opened. I made the operation, therefore, in the lower part of the inguinal space, as if I had been adopting Scarpa's plan, in the manner practised by Hunter. The limb preserved its natural warmth, nor were we for a moment in fear of gangrene, but the tenth day of the operation there was hæmorrhage. I used, without effect, the "ligature d'attente," which I had placed above the two ligatures with which I had stopped the circulation in the artery. I was obliged to lay open the artery above the place where it had been tied. Fresh ligatures were applied immediately below the origin of the profunda muscularis; this immediately stopped the hæmorrhage, which had its rise on the side nearest the heart. But on the following morning fresh hæmorrhage took place from the lower end of the artery, even perhaps from the inferior orifice of the artery, which, as I suspect, had been completely cut across by the stab of the knife in the first instance.

I was then under the necessity of laying open the artery below the wound, and applying ligatures there also. No further bleeding took place; all these ligatures came away on the fifteenth or eighteenth day, after the two last operations, without any further hæmorrhage from either end of the artery separated by this long interval. The enormous wound resulting from these three successive operations is almost healed. I will not dwell here on the circumstance of hæmorrhage from the lower end of the artery, produced by the speedy re-establishment of the circulation, and from which one might deduce consequences against the operation of Hunter, in the case of a wound with the opening of a considerable artery, and especially recent wounds. Considering solely the hæmorrhage from the side next the heart, I have to remark that it took place at the moment when the ligatures (placed at some distance from the profunda muscularis) cut the artery, and that it did not recur at the separation of the second ligatures, which were applied immediately below this principal collateral branch. Nevertheless, when I applied the second ligatures, the man was much weakened by loss of blood, and there was strong reason to fear that they would have been of still less efficacy than the first, to procure a prompt obliteration of the artery.

In practising Hunter's operation for popliteal aneurism, which we know is the most frequent of all external aneurisms, the English surgeons tie

the crural artery about the middle of the thigh, at the bottom of what we call the espace inguinal; and in so far follow the plan recommended by Scarpa, which is preferable to Hunter's, in which the artery was laid open lower down. We have, in practising the operation in the former place, the very great advantage of the superficial position of the artery, and can easily insulate it for the application of the ligature, as it is only connected with the surrounding parts by a very loose cellular texture.

The English surgeons profess peculiar views of the mechanism by which nature proceeds to the obliteration of an artery after ligature, and which induce them to make the ligatures act on the artery in a very different manner from ours. They prefer a round to a flat ligature, while we use ligatures broad like ribbons: they place only one, or at most two, and make them act very lightly on the artery at the moment of the operation; they use no "ligatures d'attente." They have sometimes practised the old plan lately brought into notice, and highly praised by M. Maunoir, of cutting the artery across between the two ligatures, but this is no longer generally practised, although they were at first great partisans of it. Lastly, as they use "no ligatures d'attente," there is nothing to oppose union by the first intention, which the English always attempt.

To determine whether our method or the English

be preferable, it would be necessary to compare a certain number of operations, equally well performed, according to the two modes, and under circumstances as much alike as possible, to know in what proportion of cases consecutive hæmorrhage is less frequent; and, lastly, in which we can reckon the greatest number of complete successful issues of the operation.

It is difficult to collect the results of experience on this subject, and I doubt if we shall ever adopt the too simple method (as it appears to me) of ligature with which the English practise the operation of Hunter. I imagine we shall long retain the use of broad ligatures, and "ligatures d'attente." For myself, at least, I shall probably follow Hunter's method, especially for popliteal aneurism, in the manner I have twice practised it within this year. As the opinion of French surgeons is not so decided and so favourable to Hunter's method as it might be, it will perhaps be useful to give the results of these two operations.

The first was performed in the month of November last, now nearly a year ago. The patient was a locksmith fifty-eight years old; it was popliteal aneurism, and had existed about a year. When I saw it, it had acquired a great size, and was accompanied by a varicose and œdematous swelling of the leg and foot. For some time he had been obliged to desist from his employment. I performed the

operation in the place where it is now practised in England. The artery was completely insulated from all adjacent parts, even from the crural vein, for the space of an inch: I placed four ligatures at about two lines distance from each other. Thus there were two ligatures to intercept the blood, the first and last being only left as "ligatures d'attente." I followed then exactly, and by design, the recommendation of Scarpa, in applying a small cylindrical body, an inch long, and two lines diameter, before I tightened the two ligatures. Over this substance I put a piece of cloth, dipped in melted plaster, and on this I tied the two simple knots of the two middle ligatures; in this manner the artery was flattened, and not compressed circularly.

I took care not to let the wound unite, and kept the lips of it separated by soft lint, with long compresses round the thigh. The limb was put into a state of demiflexion, and rested on its outer surface; bags of warm sand were placed on each side the leg and foot, as well to promote the action of the capillary vessels as to keep up the natural warmth of the part; the tumour, of which the pulsations ceased at the moment of the operation, diminished rapidly; the limb preserved its sensibility and its natural temperature; there was no hæmorrhage; all the ligatures came away on the 19th day after the operation, bringing with them the little cylinder on which they had been tied. About this time we

began to feel an obscure pulsation of the articular arteries round the knee. Thenceforward the success of the operation was certain; the wound cicatrized slowly at the same time that the tumor diminished. Nevertheless, whether from the long period during which the limb was kept in the same position on the side, or from the previous œdema having brought it into a state of great debility, there took place a considerable slough on the outer edge of the foot, which denuded the bones of the tarsus; this produced some exfoliation, and the wound altogether has been so prolonged, that it is not completely cicatrized at this day. He remains in the hospital, walking with crutches, but having very little use of his leg.

It is now four months since I practised the second operation in the same manner, and for the same disease. The subject, a man thirty-five years of age, was in more favourable circumstances, and the success was complete. The aneurism, as he said, had only become sensible within three months, and was yet but of small size, and the leg and foot were healthy. The operation was practised exactly as the preceding, except that (contrary to my wish rather) the crural vein was included in the ligature. There was no consecutive hæmorrhage, and the circulation was established with much facility and promptitude; the ligatures came away on the 19th day. At the moment I am writing, the wound

has been long cicatrized; the tumor is hard, without pulsation, and reduced to a very small size, and the patient has the free use of his limb. He is, nevertheless, still under our eyes, as he is but just cured of a slough, which, formed like the other, but smaller, round, and not deeper than the skin.

This circumstance of a slough forming on the outside of the foot, in the two cases I have mentioned, is a hint not to leave the limb too long in the same position after the operation. I had an eye to this in the more recent case which I related above, where I made the ligature of the crural artery for a false primary aneurism. In that instance there was no slough on the foot, and the only reason of the delay in the complete re-establishment of the patient was the enormous extent of the wound.

It is now some years since one of our best surgeons (M. Dubois) had an idea of modifying Hunter's operation, by making the ligature act only gently on the artery, so as gradually to intercept the course of the blood; proposing to withdraw the ligature, and indeed actually withdrawing it some days after the pulsation of the tumor had ceased. A surgeon of Edinburgh (Mr. Jones) has conceived a similar project, only he wished, that though the ligature were continued but a short time, its effect might remain, and that there should result from it a complete rupture of the internal and middle coats

of the artery. I do not know if this method has been adopted on the human subject. Mr. Jones has only tried it on animals, but it has just been employed by Mr. Cooper, and the event has not answered his expectations. He wished to avoid the section, or, at least, the too speedy cutting of the artery, but this object has not been fulfilled. In a letter which I received from him two months ago, he says, "I have just tied the crural artery for popliteal aneurism. I completely suspended the course of the blood for thirty-two hours, after this time I ceased compressing the artery, but the pulsations of the tumor returned. I again compressed it with the ligature for forty hours, and the tumor no longer had any pulsation." Mr. Cooper does not tell the means he employed for tightening and relaxing at will the ligature, without doubt it was a kind of "Serre-nœud." Nor does he tell me if, after the seventy hours, the ligature being relaxed, he withdrew it entirely, or left it in case of hæmorrhage. If he did not leave it in the wound, he must have been obliged to employ one or several others, without doubt, after enlarging the wound. In fact, on the twelfth day, came on considerable hæmorrhage, and Mr. Cooper was obliged to tie the artery completely; at the time he writes to me the patient was in as good a state as could be wished.

It must be confessed that the ligature of the

common carotid and external iliac, are incontestably the two finest triumphs of modern surgery; we do not seem to have appreciated them sufficiently. I saw at London the second example of the former operation by Mr. Cooper, where he had tied the common carotid below the tumor. It is useless to narrate the circumstances, as they may be found in almost every periodical work, and I have myself given them much in detail, in my Treatise of the Operations of Surgery. The first case (of a woman forty-four years old) failed from the effects of inflammation and the rupture of the sac, on the 23d day after the operation. On the second patient, all trace of the complaint has disappeared, and one can see nothing but the cicatrix. Three months after the operation, he resumed his employment in an iron warehouse; I saw him engaged in carrying long heavy iron bars on his shoulder: he had been similarly employed for a great number of years, and attributed his disease to that cause.

Such a success might well embolden practitioners. Several times lately, in England as well as in France, the common carotid has been tied on account of wounds; especially gunshot wounds, in which the artery, or one of its branches, had been opened. The operation has been crowned with success in some cases. It is only a few months ago that M. Larrey saw it succeed at Brussels on an English soldier; the operation was performed by

a military surgeon of his own nation. But a case more curious than all these, in which the common carotid was tied, occurred in England. I will give a succinct account of it, referring for further details, to the work in which it is narrated, viz. the Transactions of the Medico-Chirurgical Society.

A woman, thirty-four years of age, had within the orbit a fungous sanguineous tumor, of that species which the English surgeons call *aneurism by anastomosis*. This tumor was attended with slight pulsations. The origin of the disease was traced to several years back. It was increased to such a degree, as to fill the orbit completely: the eye was pushed out of the cavity; and the two eyelids, which were distended, formed, as it were, two separate pouches. Compression, and the application of ice, were tried without success. In order to remove the tumor, it would have been necessary at the same time to extirpate the eye; and the result of such an operation was more than doubtful, as the limits of the disease were not known. Compression of the temporal artery, and of the external maxillary, produced no diminution in the size of the tumor, nor put a stop to the pulsations: but it was observed, that these were suspended, and that the tumor sunk, on compressing the primitive carotid. This circumstance gave room to think, that the ligature of this artery might be practised with success, an operation which the rapid progress of

the evil in some measure justified, and which was also authorized, to a certain degree, by the fortunate results which Mr. Cooper had previously obtained from it. By the advice of this practitioner, the operation was performed by Mr. Travers, one of the most distinguished young surgeons in London, a man of real talent, of whom I have before had occasion to speak, and who has, since the last year, been nominated one of the surgeons of St. Thomas's hospital. He placed on the carotid artery two ligatures, at the distance of a quarter of an inch, one from the other. The operation was not followed by any accident. The lips of the wound were brought together by adhesive straps. The superior ligature was detached on the twenty-first day, and the inferior on the twenty-second. The tumor of the orbit insensibly diminished in size; the eye became less prominent. The patient miscarried five months after the operation: she sustained a very considerable loss, which, by the faintness it occasioned, appeared to contribute towards the decrease of the tumor, which nevertheless required three or four years to vanish altogether. Last year, when I was in London, Mr. Travers had very recently seen the woman who was the subject of this observation. Five years had elapsed since the operation; this woman, during that space of time, had become three times pregnant. She enjoyed a perfect state of health, and it was not possible to dis-

tinguish any trace of the disease which had been situated in the orbit.

The ligature of the external iliac artery for aneurisms of the crural artery in the groin, has already been practised such a great number of times, the proportion of successful cases is already even so considerable, that we cannot but blame the indifference with which mention has been made of it in some of the works of Surgery recently published in France. There are already twenty-three facts reckoned relative to this ligature of the external iliac artery: it has completely succeeded in fifteen patients. In these twenty-three operations, I include the two which have been performed in France, one at Brest, by M. Delaporte, the other at Lyons, by M. Bouchet, and which we do not call in doubt. In the number of the successful cases ought to be included that of M. Bouchet; since the patient survived more than a year, and died of the consequences of an inguinal aneurism of the opposite side. Of the twenty-one remaining operations, fifteen have been performed in London itself, in the different hospitals, by Messrs. Abernethy, Ramsden, Astley Cooper, Brodie, and Lawrence, all of them men to whom it would be as impossible as to ourselves to publish fabrications.

Mr. Cooper alone had six times made the ligature of the external iliac artery before my journey to London; and during my stay there I saw him

perform it for the seventh time. Four of his patients were completely cured. One of the other three died in the thirteenth week after the operation, by the rupture of an aneurism of the aorta. At this time, the circulation was established in the limb. I saw this limb injected amongst the anatomical preparations preserved by Mr. Cooper: some large and fine anastomoses were seen around the pelvis, between the dilated branches of the internal iliac and crural arteries. In the sixth patient, gangrene seized the leg, and amputation of the thigh was practised without success. Lastly, the seventh died in consequence of an hæmorrhage which took place on the fourteenth or fifteenth day from the operation, at which I assisted. The following are some details respecting this latter.

The patient was a carpenter, thirty-eight years of age. Although the aneurismal tumor extended from the middle of the thigh nearly to the Fallopian (*Poupart's*) ligament, this ligament was, nevertheless, free: it appeared to me, that the crural artery could still be compressed on the horizontal branch of the pubis; and that it would, strictly speaking, have been possible to have performed the operation by opening the sac. But this operation would have been attended with very great difficulties, and it is still doubtful whether the superior ligatures could be placed below the origin of the profunda. So that the ligature of the external iliac was per-

fectly indicated. It was performed with admirable precision. Mr. Cooper made in the teguments of the abdomen, a demi-elliptical incision, the convexity of which was directed outwards and downwards from above, and a little within the middle part of the Fallopian ligament, to the inner side of, and a little above, the anterior and superior spine of the ilium. He afterwards divided, successively, the different layers of aponeuroses and muscles, detached the peritonæum from above the united fascia of the psoas and iliac muscles, and thus came to the external iliac artery, which he isolated from the accompanying vein and crural nerve, without subjecting it to any distention. In order to pass a double ligature, a part of which was afterwards withdrawn, so that the artery was restrained by one single ligature, and no ligature of reserve left, Mr. Cooper employed an instrument of steel, with a handle. This instrument, which was very much curved at its end, and terminated by a small bulb, through which was pierced the eye intended to receive the ligature, has some resemblance to the needle of M. Deschamp: it is, perhaps, better suited to the case in question than this latter, but cannot replace it in others. I have said, that one ligature only was left upon the artery: it was first fixed by a double knot, or, what was formerly called, the surgeon's knot, then by a single one. The wound was afterwards united by adhesive straps. It was

on the 19th of August that the operation was performed. I saw the patient again on the 23d, the 27th, and, for the last time, on the 31st of the same month; consequently, the fifth, eighth, and twelfth day from the operation. To this last period, and even to the fifteenth day, his situation was as satisfactory as could be desired: the bulk of the tumor was greatly diminished, no pulsation was to be felt in it: the limb preserved its natural heat and sensibility; the patient could easily move his toes and foot; and took food. But, on the fifteenth day, a considerable hæmorrhage took place through the wound, which had been preceded by severe pains in the abdomen: the patient died two days afterwards, being two days before I quitted London. I heard of his death before my departure; but I could not be present at the opening of the body. It was only told me, and as a peculiarity to which a great importance was attached for explaining the hæmorrhage, which caused the patient's death, that the obturator artery, which usually arises from the trunk of the internal iliac, or from the epigastric artery, was furnished by the external iliac, and had its origin immediately above the ligature.

What I have just said with regard to the ligature of the external iliac artery for inguinal aneurism, naturally introduces a fact which I draw from the practice of Mr. Cooper, and which, I believe,

is not known in France. It is known that, for these kinds of aneurisms, before the ligature of the external iliac artery was invented, Brasdor, the father, and Desault, had conceived the idea of the ligature of the crural artery below the tumor. M. Deschamps is the only French surgeon who, in one single case, executed this operation: the result was fatal. Mr. Cooper has repeated this experiment, not for an aneurism of the crural artery in the groin, but in a case of the external iliac artery, in which it was impracticable to tie the artery above the tumor. He accordingly made the ligature of the crural artery immediately below Poupart's ligament, between the origin of the epigastric artery and the profunda. The pulsations of the tumor continued; that was of course; but the tumor itself made no further progress: in a short time, even its bulk was diminished, and to such a degree, that it was thought it might, in a short time, be possible, perhaps, to tie the external iliac above. The ligatures came away without accident; and, after the wound was healed, the patient was sent into the country for the recovery of his health. But the tumor burst, an effusion of blood took place into the abdomen and into the cellular texture of the pelvis, and the patient died without Mr. Cooper being able to ascertain either, whether the tumor, previously to its bursting, had made any fresh progress, or if the

rupture of the aneurism was produced by any accidental circumstance; and without any examination being made of the body.

The fatal prejudice of the gentry in favour of oculists is still greater in England than in France; and the English surgeons, on their part, attach but little importance to the bringing back the surgery of the eyes into the general practice. In France, on the contrary, the reign of the oculists is drawing near its end; in a short time we shall be again in possession of the surgery of the eyes, and we shall attach this branch of the art to the trunk from which it should never have been separated. And how should we be otherwise than desirous of seeing our efforts, on this score, crowned with success. In fact, without speaking of the offence which is given to surgery by that varnish of quackery, of which even those oculists, to whom we cannot deny some talent, have never been willing to divest themselves; is it not remarkable, that it is not to them, but to surgeons properly so called, that is to say, of men exercising all the branches of surgery, that we owe the most important discoveries, the best inventions, by which the surgery of the eyes has been brought to perfection? Daviel, it will be said, an oculist, created the operation for the cataract by extraction: but he did nothing more than convert into a methodic operation, what, before him, Mery, J. L. Petit, and other surgeons

had done, in cases where, either from some accidental cause, or in the midst of attempts at the depression of the cataract, the crystalline lens had passed into the anterior chamber of the eye. Was it not Cheselden who furnished the first instances of operations performed for cataracts existing from the birth? Is it not to the same surgeon that we owe the artificial pupil? The best method of performing the operation for fistula lachrymalis, is it not that of J. L. Petit, brought to perfection by Desault? What were Louis and Bordenave, one of whom has left almost nothing to be said or done after him, in whatever concerns certain diseases of the whole globe, which lead to the necessity of extirpating that organ, and on this extirpation itself; and the other has not less perfected the treatment of some diseases of the eyelids, more especially that denominated *ectropion?* Surgeons of eminent talent and great knowledge. Lastly, it is to Scarpa, to whom we cannot deny the honour of being of one of those men who have most enriched surgery for these twenty-five years past, to whom we owe the most useful innovations, which the science of diseases of the eyes, and the practice of the operations they require, have received in our own time.

I can scarcely see, I shall not say of real perfect improvements, but of remarkable inventions, any thing but the process of Mr. Adams, oculist of London, for the operation of the artificial pupil,

and the operation which he proposes to substitute for the simple excision of the conjunctiva in the eversion of the lower eyelid. But yet the process of Mr. Adams for the artificial pupil, which is more particularly applicable to cases of obliteration of the natural pupil, the cornea still preserving its transparency, is nothing more than a modification of that of Cheselden; or rather it is that of Sharp, which he has revived, and from which he appears to have obtained, in several instances, success. Mr Adams, like Sharp, recommends the use of a small knife, the blade of which, being very thin and about three-fourths of an inch long, is of a uniform breadth of half a line, or three quarters of a line at most. This blade, which only cuts on one side, is terminated by a point extremely sharp, but not long, and rather rounded off. The instrument is plunged into the eye, through the sclerotica, behind the edge of the cornea, and in that part where the needle is introduced for depressing the cataract. The edge of the knife ought to be turned backwards. As soon as it has pierced through the sclerotic and choroid membrane, and the retina, the iris is pierced from behind forward, near its great circumference, so that a part of the blade may enter the anterior chamber of the eye; then with the edge of this blade, which is in this manner applied to the anterior surface of the iris, this membrane is divided, as much as is possible, in the

whole extent of its transversal diameter. The two edges of this division separate a little one from the other, whether by the retraction of the radiating muscular fibres in its composition, the existence of which I can scarcely credit, or by a simple contractability of texture, which ought to be so much the more efficacious, at that time when the iris has been a little distended by the obliteration itself of the pupil. A small quantity of blood is effused at the moment into the anterior chamber, and renders the aqueous humor turbid: but if the operation is not succeeded by any accident which endangers the eye, this mixture of a little blood with the aqueous humor is only a temporary obstacle, perhaps too, an obstacle useful to the re-establishment of vision. This blood is insensibly absorbed; and in proportion as the aqueous humour resumes its natural transparency, the new pupil is discovered, which, in the shape of an elliptic transverse opening, furnishes more and more easily a passage to the rays of light.

A few months ago, having occasion to form an artificial pupil upon a lady, in whom the obliteration of the natural pupil, on one side only, had succeeded to the operation of extraction of the cataract, I employed this process of Adams. The operation, which I performed in presence of my friend Dr. Nacquart, who was much interested for the patient, presented no difficulty, and only took up a few moments. The results were satisfactory;

the eye scarcely suffered any pain during the first few days; no inflammation supervened. After six weeks, the blood effused into the anterior chamber at the moment of the operation, was absorbed; the aqueous humor was renewed, and the patient had recovered her sight, which however was not perfect. Perhaps the eye, where the artificial pupil exists, partakes of a slight gutta serena, which, in the opposite eye, appears to coincide with the commencement of a cataract. Beside the artificial pupil, although it allows an easy passage to the light, is not so large as it ought to be: performing the operation for the first time by this method, and hindered by the blood, which was very quickly effused into the anterior chamber of the eye, I think I did not sufficiently extend the incision of the iris towards the internal part. The patient is more satisfied with the result of the operation than I am myself.

I shall beg leave to say here, while speaking of Mr. Adams's operation, that I do not know whether, of all the different modes hitherto proposed for this operation, there be one which deserves to be exclusively adopted. The operation for the artificial pupil has not yet been practised a sufficient number of times, for the results of it to be perfectly known. Well, success has been obtained, and by the simple incision of the iris, in the direction of one of its diameters, especially of its transverse

diameter, and by the excision of a portion of this membrane, and by the detaching of a part of its circumference. These are the three principal methods by which an artificial pupil can be made of the iris; and perhaps it is of less consequence at present, to prefer one of these methods to all the rest, than to adopt each of them to one of the principal circumstances under which the operation is practised.

In order to present here the only facts which are proper to myself with regard to this operation, I shall make known the following case, which regards the manner of performing this operation by detaching the iris in one part of its adhering edge, a manner proposed and recommended by Scarpa. In the course of the year 1813, we had in the Charité, a man whom two different affections of the eyes rendered completely blind. He had been so several years. On the left side, the iris and the pupil were entirely concealed by an extremely thick albugo, which occupied the whole cornea; there was no operation to be undertaken for this eye. On the right eye, the transparent cornea of which presented no alteration, there existed a cataract, which might be easily adjudged to be adhering, on account of the considerable constriction and complete immobility of the pupil; a species of cataract which is always, or almost always, membranous and crystalline, and in which also there is

commonly an increase of the density, an almost cartilaginous state of the crystalline capsule. Although I had little hope of success, I decided on attempting the depression of this cataract. It was exactly the case for practising this method. I do not carry the predilection in favour of extraction so far as never to practise the depression; I acknowledge cases in which this last method ought to be preferred; but whenever no particular circumstance decides for the depression, and the two methods are equally admissible, I practise the extraction which has always better succeeded with me than the depression, and to which my frequent successes attach me more and more every day. I attempted then, in the unfortunate subject I am speaking of, to depress the cataract of the right eye, which was at the same time, without doubt, membranous and crystalline. I did not succeed, that is to say, I could never detach the crystalline or its capsule from the iris, the adhesion was so close between these parts. But in the midst of the attempts I made to destroy these adhesions, and in spite of the caution with which I proceeded, the iris itself became detached in one part of its circumference, not on the internal part, and where Scarpa wishes to effect this separation when the operation for the artificial pupil is purposely undertaken, but on the external part. I saw no other step to be taken than to effect the separation of the iris to a greater extent.

To obtain this end, I directed the movement of the couching needle, and the result of the operation was this; not the depression of the cataract, but an artificial pupil, which I had not intended to make, and which occupied the external side of the iris. No effusion of blood took place into the anterior chamber; the aqueous humor was not turbid. The symptoms subsequent to the operation were moderate, and the operation itself had all the success that could be expected from it. The artificial opening in the iris remained; it afforded a passage to the light, and the patient left the hospital, seeing extremely well how to guide himself, and able even to distinguish a number of tolerably small objects.

In the most simple kind of *ectropion*, that is to say, in the eversion of the inferior eyelid, where the integuments of this lid have not experienced any loss of substance, or the edge is not drawn down by any cicatrix, there is merely tumefaction of the conjunctiva: by the effect of the puffiness of this membrane, the edge of the eyelid is elongated, and takes the form of a crescent, the concave part of which is turned upwards and a little forward. To remedy such a deformity as this, the excision of the whole portion of the conjunctiva which belongs to the inferior lid is practised, which membrane is divided as near as possible to the tarsal cartilage, along the edge of the eyelid, and as

near as possible also to the fold which it forms by reflecting itself on the globe of the eye. This is the operation recommended by Bordenave; it is simple, almost always free from any accidents, and far preferable to the simple transversal, or demi-elliptical incision of the skin below the edge of the eyelid, which until the time of Bordenave, was the only operation performed for the ectropion. In proportion as the wound resulting from the excision of the conjunctiva heals, the edge of the eyelid is drawn upwards and a little forward, and thus brought back over the globe of the eye. It is, however, never brought sufficiently high for the two eyelids to come in contact by the depression of the superior one. The eye always remains partly uncovered towards the inferior part.

Without denying the advantages to be derived from the excision of the tumefied, and as it were spongy portion of the conjunctiva in the ectropion, Mr. Adams maintains, that results still more satisfactory are obtained, by joining to this excision of the conjunctiva, that of a triangular flap of the eyelid itself. This flap ought to have its base on the edge of the eyelid; this base comprehends a portion of the tarsal cartilage. There results from the excision of the flap, a wound of the shape of a V, the lips of which ought to be united by a single suture made near the edge of the eyelid. Such is the plan invented by Mr. Adams for the operation relating to the ectropion, in favour of which

he relates several instances of its success. Without taking into the consideration, how much this method is complicated, its immediate advantage is to procure a diminution of length in the edge of the eyelid. If we are to believe Mr. Adams, the edge of the eyelid thus shortened, and having lost its curved form, accommodates itself to the surface of the eye much better than when excision of the conjunctiva only has been practised. The ectropion is thus, as he pretends, less subject to relapse, or rather cannot be re-produced.

What Mr. Adams affirms, in order to enhance his method, of the frequent relapse of the ectropion after the excision only of the conjunctiva, is a gratuitous assertion, and contradicted by experience. I have already, in a tolerable number of cases, undertaken the cure of ectropion by the ordinary method; the operation has always succeeded as far as the degree, and other circumstances of the disease would permit, and I have not yet observed a case where it has relapsed. Let us grant, then, for the process of Mr. Adams, the advantage of a more perfect cure of the deformity, the edge of the eyelid being rendered straighter, and accommodating itself better to the inferior part of the eye. Several facts related by Mr. Adams seem to leave no doubt on this score. But has Mr. Adams, in the details of these facts, kept himself perfectly free from the predilection so common to inventors in all circumstances? And in the most favourable

supposition, is the advantage in question such, that, in order to obtain it, we ought not to be afraid to practise an operation, more delicate, more minute, and more complicated than the simple excision of the conjunctiva.

Mr. Adams carries his confidence in this proceeding so far as to recommend it as applicable to cases where the inferior eyelid is drawn down and eversed by burns, by deformed cicatrices which unite it to the cheek, cases in which the ectropion is generally considered incurable. But it must be performed at the same time that the bands which unite the inferior lid to the cheek are divided. Mr. Adams is of opinion, without however, resting this conjecture on any fact, that the inferior edge of the eyelid, of which a part has been cut away, and the wound united, being rendered shorter and more tense as it were, would on that account even resist the force, which would tend to produce a fresh eversion, and that thus the formation of a broad and supple cicatrization would be obtained upon the wound produced by the section of the ancient cicatrix.

The taste of the English nation for benevolent establishments cannot be too highly commended: but if not carried so far, and better directed, perhaps it would produce still more satisfactory results. Certain establishments of this nature, to which they attach in England a great importance, are perhaps

more disadvantageous than useful. Such in particular appears to me to be the infirmaries established in several towns in England, for the treatment of diseases of the eyes. I have only seen that of London. It is a dispensary, or a central place for consultations, rather than a hospital or infirmary properly so called. There are only a very small number of beds disposable in this establishment. Such patients only as have very serious diseases of the eyes, are allowed to remain here during the whole time necessary for their cure, and more particularly such as are about to undergo, or have undergone operations which require them to observe rest, and abstain for a time from their occupations. For the rest of the patients a gratuitous distribution is only made of the medicines which the physicians or surgeons attached to the establishment prescribe. One day of every week is set apart for consultations and the performance of operations. I have several times assisted at these consultations, and have always seen a great crowd of patients. I do not know, however, whether every person affected with a disease of the eyes is at liberty to come there, or whether, as at the hospitals, there is a necessity for the recommendation of one of the patrons, or subscribers to the establishment.

Well, all prejudice apart, such an institution is not of so great utility as it may appear at first sight. It is not possible that the patients should receive so

much attention as in the hospitals; and how prejudicial must be the necessity of going out and exposing themselves to the air to a great many of them, in order to come to the place of the consultations? Neither is this institution calculated for the interest of science. The multitude of patients does not allow of their being examined with all the necessary attention. Neither is a visit of once a week sufficient for observing the progress of certain diseases of the eyes, and the consequences of some of the operations they require. This institution has still another fault, that it tends to consolidate what the English surgeons ought, like us, to shew themselves impatient to put a stop to; that is, the separation of occular from general surgery; it tends to concentrating into the hands of a small number of men, the opportunities of seeing and treating diseases of the eyes. There are, I acknowledge, at this moment, either by a fortunate chance, or by deliberate and well calculated choice, as operators at this infirmary, two men distinguished in surgery; Mr. Lawrence, one of the surgeons of St. Bartholomew's, and Mr. Travers, of St. Thomas's: but I do not believe that it is determined that their successors shall be surgeons, and not exclusively oculists. Who knows, if they themselves will not in a short time take this last course, or whether it will be possible for them to strive against the reputation which the world will not fail

to give them, of being men more skilful in the treatment of diseases of the eyes, than in the other departments of the healing art?

At all events Messrs. Travers and Lawrence, both of them attached to this infirmary for but a short time, where they have replaced Mr. Saunders, have not acquired in the observation of these diseases, and in the practice of the operations which belong to them, that tact, that promptitude of judgment, and that dexterity which long experience gives, and which they will not fail certainly to acquire. Their practice, uncertain as yet, and fluctuating in many respects, has not furnished me any particular subject for panegyric or criticism.

The bistoury of Pott, or that which has a narrow curved blade, with a sharp or probe point, according as they may have occasion or not, to perforate the coats of the rectum before making the incision in the operation for fistula in ano, is still the favourite instrument of the English surgeons for this operation. At least I saw it three times performed with this instrument in London at three different hospitals, and by three different surgeons. It must be because they have never practised it, or have never seen it practised, by the method which consists in conducting a common straight bistoury upon a grooved director open at the end, which passes through the fistula, and the extremity of which rests upon the hollow of a gorget of wood intro-

duced into the anus, that they have not adopted this method exclusively to every other. Whether the fistula be complete or not, that is to say, whether there be a perforation of the coats of the rectum or not, whether the external orifice be near to, or distant from, the anus; whether the fistula be nearly horizontal, that is to say, that it is not elevated much above the anus, or whether it runs along for a certain distance parallel to the intestine, and only terminates at some height above the anus; the operation with the gorget, the straight bistoury, the grooved director slightly pointed, open at the end, and made of steel rather than silver, so that it shall not be flexible, does not allow of any, or scarcely any, modification. It is equally applicable in all cases, and in all varieties, of the disease.

There is but one thing that may be objected to this proceeding, that is, that by the manner in which the parts to be divided are comprised, at the moment within the angle formed by the grooved director and the gorget, the bistoury afterwards acts by pressing rather than sawing, its action is not so prompt as one might desire it to be: it is almost always necessary, especially if the fistula be a little extended, to pass the bistoury twice upon the grooved director, in order to divide completely the parts comprised between the fistula, and the circumference of the anus. This necessarily prolongs

a little the operation. But ought it not to be still more painful, when performed only with the bistoury of Pott, without previously introducing any grooved director into the fistula, or when performed by another method, which is only a modification of this one, and which consists in introducing into the fistula a flexible grooved director, which is brought out from the interior of the rectum by the anus, and on which is afterwards directed, either a slightly curved, or a straight, bistoury? In order that the operation, performed in one of these two last methods, be as simple as possible, it is necessary that the fistula should be short, that it be not winding, that it have an internal orifice, by which may be passed easily into the rectum, the extremity, either of Pott's bistuory, or of the flexible grooved director; it is necessary also, that this internal orifice of the fistula be not too far distant from the anus. It is in the cases of this last description, which are not the most common, that it may be effected almost indifferently by one of these methods, or by the gorget, &c. Suppose, on the contrary, a fistula rather long, narrow, and tortuous; suppose, that if there exist any internal orifice, it is situate at a distance not very considerable above the anus, or if the fistula only opens externally, it becomes equally necessary to perforate the rectum at a point distant from the anus, it will not be without the risk of not following the direction of this long

and tortuous fistula, if it be attempted to be done with the bistoury of Pott; it cannot be without fatiguing, and irritating greatly the anus and interior of the rectum, without giving the patient exquisite and prolonged pain, that either Pott's bistoury, or the extremity of a flexible director, can be brought by the finger, from the interior of the rectum to the outside.

At all events, these different modes of proceeding to the operation for the fistula in ano by incision, regard only the division of the parts comprised between the fistula and the circumference of the anus. That is what essentially constitutes the operation, it is in that which it principally consists: but this simple incision of the fistula on the side of the anus, would not suffice in all cases. Now, when the operation is performed for the fistula in ano the least complicated, it is good to enlarge the incision outward, not only towards the teguments, as J. L. Petit has directed, in order to form what he calls the drain (*gouttière*), but through the whole extent of the fistula. This precaution, I know, is not indispensable; a great many practitioners neglect it; I myself, on the contrary, should renounce it unwillingly.

Again, how often is it necessary, after having divided the parts comprised between the course of the fistula and the anus, after having enlarged this

first incision outwards, to cut off the edges of it, because the ancient fistula was accompanied with callosities, or because, around the edges of the external orifice of the fistula, the teguments were become thin and detached, and, after the incision, could be made again to adhere to the subjacent parts. In general, it is doing a great deal towards the speedy healing of the wound after the operation, to remove these portions of skin that are become callous, thin, and detached. Experience proves that this wound makes a rapid progress towards healing, when, it is externally, more extensive than deep, and surrounded on all sides with sound parts.

A multiplicity of external orifices, or rather the existence of several secondary fistulous sinuses, communicating with the main sinus, is another very frequent occurrence in the fistula in ano, which renders the operation complicated. After having divided the principal sinus, that which leads most directly to the rectum, ought not the others to be divided, so as to make each of the secondary incisions fall on one of the edges of the principal one? And because, in this case more than any other, callosities surround the different fistulous sinuses, we are obliged to cut off several of the edges of the different incisions, or to reduce the flaps left between them.

Thus then like all operations performed immediately on diseased parts, the operation for the fistula in ano is not subjected to one constant uniform mode of execution; it is anomalous, if it may be so expressed. In the greatest number of cases, nothing more is necessary to be done than to make the simple incision of the fistula on the side of the anus; and in many cases, this incision is only a small part of the operation. It would be extremely useless, assuredly, to embarrass the art with so many instruments, and so many different modes of proceeding, for what is the most simple and easy in the operation for the fistula in ano.

It is, moreover, a reproach that may be cast on the surgeons who have preceded us, the having in several other operations, attached too great an importance to one of the periods of which each of these operations is composed, to one of the manœuvres which ought to take place in them, and in almost every instance, to that one of the manœuvres, and that one of the periods, which presents the least difficulties. To see that the methods without number in the lateral operation of lithotomy, relate solely to the incision of the neck of the bladder, and of the prostate gland, that is exclusively for that end that they have been imagined, would not one say that this incision of the prostate gland and of the neck of the bladder, alone constitute the operation for the stone? Who would not believe that it is the

essential part of it; that it is that in which there are most difficulties to conquer? And yet, as has already been said, and which cannot be too often repeated, the difficulty in the operation for the stone, is not in penetrating into the bladder, to cut one's passage into that organ; it is to extract the extraneous body or bodies that may be found therein. It is that extraction alone which presents any real difficulties, and prolongs the duration of the operation. See also with what useless riches the art has been loaded, in the operation for the cataract by extraction, and for the period only of the section of the cornea. How many different instruments, some of them even extremely complicated, have they not invented to effect this incision of the cornea, which, unless in cases extremely rare, where one has to operate on very small eyes, deep seated, and very moveable, is in reality the most simple part of the operation! It is in opening the capsule of the crystalline lens, and in getting out this body, that we meet sometimes with sufficiently great difficulties.

I return now to that in which the practice of the English surgeons differs somewhat from our own in regard to the operation for the fistula in ano. We think it useful, after the operation, to introduce into the rectum, and above the boundary of the incision, a tent or plug of lint, which we take care to insinuate between the lips of the wound. This

tent is renewed every day at each dressing; only it is made small in proportion as the wound diminishes in depth, and cicatrizes from without inwards. It is intended to keep the wound open, and to prevent the newly divided parts from uniting again, as might happen, before those which formed the sides of the fistula. In ordinary cases, it is not till after a month or six weeks, or even two months, that the wound is completely closed. But it must be added, that it is with us a very uncommon occurrence, that a fistula in ano is not cured after the operation has been properly performed, and followed by methodic dressings.

Those of the English surgeons whom I have seen perform this operation, were contented with placing a small strip of linen between the lips of the wound. They ought at a later period to abandon this wound to the precaution of cleanliness only; and I have heard them say, that it would be cured in fifteen or eighteen days. It is neither a new thing, nor is it altogether peculiar to the English surgery, to abandon the wound resulting from the operation for the fistula in ano to itself. Our Poteau had already spoken in favour of this practice; and I am very much mistaken if it has not been adopted by some of the successors of Poteau in the great Hotel Dieu at Lyons, especially by Marc Antoine Petit. But in thus confining ourselves to the precautions of cleanliness, after the lips of the wound have been

kept asunder for several days, is the cure, not of this wound but of the disease itself, well assured? I have said, and I repeat it, that it is for us French surgeons one of the most uncommon events, the relapse of the same fistula for which the operation had been performed. Is the case the same when every methodic dressing has been laid aside, and especially when the wound is not kept open by means of a tent introduced into the rectum, and renewed every day? Hitherto I have not been very sirous, and I am not more impatient at this moment to appeal to the testimony of experience, in order to dispel or confirm my doubts on this score.

Some English practitioners having remarked that in the chronic enlargement of the testicle, caused by the venereal poison, and consequently admitting of a favourable termination, the tumor has generally a pyramidal form. A sarcocele (properly so called) may put on this appearance. This pyramidal form is not peculiar to the venereal chronic enlargement of the testicle, and ought not to be considered as a negative sign of the scirrhous or cancerous state of this organ; but it is very true that it belongs more especially to the first of these two affections. Even before I was acquainted with the observations made on this subject by the English surgeons, I had already remarked several cases where the venereal character of this swelling had been established by the successful result of the anti-

syphilitic plan of treatment. I had remarked, that the tumor differed in some respects from the true sarcocele, and I think I recollect that in almost all these cases the tumor was pyramidal, that is to say, more or less considerable at the bottom, diminishing gradually in size towards the spermatic cord, without any decided point where the healthy part began and the tumor commenced; and within this year I have had many occasions of confirming the remark of the English surgeons.

I have only amputated the penis twice (for a cancerous affection of that part) for many years, and since I have been appointed to the hospital of La Charité, I have seen Mr. Boyer perform the operation once. The three patients had had a natural phymosis: none of them had submitted to the simple operation by which we so easily terminate the inconveniences of this malformation. This circumstance struck me much; and when it has occurred to me, I have never omitted an occasion for several years past (whether in my clinical lectures or my course of surgical pathology) to say that an habitual phymosis, natural or accidental, may easily become a predisposition to cancer of the glans. Who does not see that the sebaceous matter retained under the prepuce, must be a permanent cause of irritation to the prepuce, and even to the glans? and may we not add also the compression, more or less frequently repeated, of the

tight orifice of the prepuce on the glans in coition. I conceive very easily how these two causes, the one acting constantly, the other at intervals, may bring the glans into that state of phlogosis, or chronic inflammation, which in time degenerates into cancer.

A number of facts related by Mr. Hey in his Practical Observations, confirm my sentiments on this subject: Mr. Hey has twelve times practised the amputation of the penis, for a cancerous affection of the part. He gives much in detail the circumstances of each. In reading these "Observations," we may remark, and Mr. Hey himself notices the fact, that nine out of the twelve had phymosis, either natural or accidental, and in all the cases the phymosis had continued till the development of the cancer.

The practical inference to be drawn from what I have said is, that we cannot too strongly impress on the minds of those who have a natural phymosis the necessity of submitting to the operation, as however trifling it may appear, it may lead to cancer of the penis.

If phymosis produce cancer of the penis, or rather if it be a predisposing cause which acts slowly, may not this be, oftener than in any other part of the body, an affection purely local? It seems to me, that in the didactic works on surgery, and I would be understood to mean, more especially those writ

ten by practical men, less is said about the re-appearance of the disease after cancer of the penis than of any other part of the body. It is only by collecting a great number of facts, that we can resolve this question positively, and in this view Mr. Hey's "Observations," of which I have just spoken, are precious. Out of the twelve cases, Mr. Hey saw only three in which the cancerous affection was reproduced, and they were those three where there had *not* existed previous phymosis. It is possible that, losing sight of the other patients, after the apparent success of the operation, he might not witness the reproduction of the disease in them. It appears to me, however, that the silence of Mr. Hey in this respect may be interpreted in a manner favourable to my supposition.

I have mentioned having twice performed this operation, and witnessed a third. The following are the results which may serve to decide, if it be true that cancer of this part is re-produced less frequently than cancer of any other part.

In the patient operated on by M. Boyer and me at La Charité, there was no recurrence of the disease, at least we saw no appearance of it during the short time that he survived the operation. He sunk under the consequences. Beforehand, and even at the moment of the operation, he appeared

resigned, and to look on his situation without alarm; but the wound was scarcely in train for cure, when he fell into a profound melancholy. His death terminated an uninterrupted train of nervous symptoms, so varied and so anomalous, that it would be difficult to describe them; and for which we in vain used every means which reason and medicine could suggest. Some circumstances which immediately preceded his death gave us reason to think, that he hastened this event by taking at once a quantity of opium which he had reserved out of his daily dose.

There has been no recurrence of the disease in the two individuals which I operated on, at the interval of a few months, six years ago; one of them died a short time since, and from all I can learn his disease was not cancerous. The other is still living. He is a man formerly holding high military rank, and whose name is for ever celebrated in science. Retired to the country, a short distance from the capital, he lately informed me of the good state of his health. He is arrived at that time of life, when men of perfect physical integrity are no longer annoyed by desires, but I admire not the less the philosophy and frank gaiety with which he speaks of the recollections that now content his imagination.

How could I, during the short stay I made at

London, become acquainted with all the peculiarities of the practice of English surgeons, with regard to the diseases of the urinary passages! These diseases are so numerous, in men particularly! Each of them has so many different forms, and consequently requires such a variety in the treatment. The following is all that I have collected on the subject.

To examine the bladder, especially when there is reason to suspect the existence of calculus, the English surgeons employ a catheter, without a canal, or a sound of steel; the hollow catheters of silver are reserved by them exclusively for the evacuation of the urine. The hollow catheter has, however this advantage over the sound, that, after having examined the bladder with it while full, we may afterwards draw off the water without removing the instrument. On the other hand, I do not hesitate to prefer the sound for those cases, where the bladder contains a small stone not easily found by the instrument. The sound, whether of steel or of silver, being more solid and more heavy, necessarily produces a noise more distinct and more characteristic, when it strikes the stone, than that which is produced by the hollow catheter; and this is exactly the advantage which the English surgeons claim for it: and if it be true, as it is said, that the rapid passage of the urine into the catheter, at the moment it penetrates into the bladder, or the agitation of the fluid in the catheter, moved

in different directions, may produce a sound liable to be mistaken for the shock of a stone, we shall avoid this source of error, by using the solid steel sound.

Without doubt, the prostate gland is susceptible of various pathologic states, which are all, or nearly all, causes of the retention of urine, in a greater or less degree: inflammation, which generally terminates in suppuration, and gives rise to an abscess, of which the matter is evacuated almost always by the urethra: a state of enlargement, or chronic swelling, to which men, advanced in age, are more exposed than the young, are the diseases of which the prostate is more peculiarly susceptible. But these are by no means so common as the English surgeons suppose, and we may reckon them amongst the most unfrequent causes of retention of urine. As far as I can see, the English surgeons are not so familiar as we are with the art of treating strictures of the urethra, and the various accidents to which the strictures give rise. The public will think as I do when they are informed, that the English practice still, the operation of cutting into the urethra by an incision into the perinæum, either into the part which is the seat of stricture, or nearer the bladder: whenever the introduction of the common catheter is attended with much difficulty, and there exist urgent symptoms of retention of urine, and this even when there

does not exist either urinary abscess or infiltration of urine into the cellular texture. This operation, which we call La Boutonnière, is however very different when practised for an abscess in perinæo from infiltration of urine, when we make the opening to allow the matter to be discharged and prevent any further extravasation, in which case, we may defer the introduction of a catheter into the bladder. As soon as the infiltration of urine, or urinary abscess, has rendered necessary a deep opening in the perinæum, to clear away the obstacle in the urethra, is no longer of so much importance, as when there exists only retention, but retention *complete* of the urine.

Perhaps some French surgeons may perform the operation of La Boutonnière, in the case of complete retention of urine by stricture, and after some vain attempts to introduce the catheter into the bladder; but this practice is not adopted generally, is not used by able surgeons. If the patient has courage and perseverance a skilful surgeon may almost always succeed in passing the catheter, especially the conical catheter, (an instrument which certainly requires an experienced hand,) one may overcome all the obstacles to the passage of the urine, of which the urethra can be the seat.

We know that Hunter, Home, and some other English surgeons, wished to revive the treatment

of strictures by caustic. This method, which never had many partisans, is no longer recommended in England any more than in France. Those of the English, who still retain some faith in the plan, only propose to admit it in cases where the obstacle consists only of a simple thread in the internal surface of the canal.

For a long time, almost every thing has been said and imagined on the subject of lithotomy, of all grand operations the one most frequently practised. It being understood that we are speaking of lithotomy on men, and lithotomy practised by the method called *lateral*, but which would be better named the *lateralized* method. In English, as in French surgery, this operation has been carried to the highest point of perfection, of which it appears capable. The only surgeon I saw perform this operation in London was Mr. Astley Cooper; I saw him perform it twice: in both cases the neck of the bladder and the prostate were divided with the cutting gorget.

I mentioned on the occasion of the operation for the *fistula in ano*, that this division of the prostate and neck of the bladder do not constitute the operation of lithotomy, though a principal part in the lateral operation on men. Nevertheless, it is this incision which, (in all the regular modes of performing lithotomy,) forms a period distinct and insulated

from all the others; it is to this part of the operation, and this only that the various modes of the lateral method allude. As in the different manner of performing other operations, those of lithotomy are almost all equally good and practicable: none of them have any positive value, but are all relative to the dexterity and habit of employing them which the operator has acquired; the different methods, on the contrary, by which the same operation may be done, are not equally admissible; each is absolutely good or bad, or at least its advantages or its imperfections belong to it essentially. It is impossible therefore not to dilate on several methods of performing an operation, but we might dispute eternally about a preference for one of the means by which the same process may be carried into execution.

In particular, with respect to the lateral method, the only one now practised, there is scarcely a stage of it which is generally followed. Let a foreigner try to find out and compare the practice of the French surgeons; he will see many clever men, many experienced practitioners, and especially those placed at the hospitals for students, practise the operation of lithotomy in several manners, for the purpose of shewing the pupils the different means by which the end can be accomplished. In France, nevertheless, if there be one mode more common than another, and which is preferred by the greatest

number of practitioners, it is that in which we use the lithotome cachée of Frère Côme. As far as I know, the instrument of Hawkins modified with that which Mr. Cooper twice employed in my presence, is equally employed by the English surgeons. Some of them preserve the operation of Cheselden in all its purity. One of the cleverest operators in London, Mr. Thomas Blizard, uses, for the purpose of cutting the neck of the bladder *from within outwards*, a simple knife, of which the blade is long, narrow, without any curve, and of which the point is turned up into a button for the purpose of sliding along the groove of the staff. Our instrument of Frère Côme cannot be much if at all employed in England. One has difficulty in finding them at the first cutlers in London; those which I saw were more like rough copies of the instrument than the instrument itself.

Our cross-shaped forceps are not adopted by the English surgeons, who continue to use the forceps with straight parallel blades. Their catheters are much larger than ours, and in that respect appear to me preferable. I have long observed that ours were too small for the diameter of the urethra; and I have for some time used larger than those adopted by French surgeons in general. Those which I now employ are what I brought with me from London, of which however I have somewhat changed the curve. We give to our catheters a slight curve

at the handle in a contrary direction to the great curve, by means of which the instrument presents itself more easily to the finger of the operator after the incision in the perinæum. As to the principal curve of our catheters it is very considerable, so that the beak of the instrument, which is prolonged a little beyond the curve, is nearly in a right angle with that portion of the instrument next the handle. The English catheters have only one curve less marked and consequently forming a segment of a larger circle, and the beak is also prolonged, but very little.

This shortness of the beak, and its inclined direction, are almost indifferent, if the catheter or rather *staff* be only to serve the purpose of conducting into the bladder an instrument, with which to cut the neck of the bladder from within outwards. For example, although the form of our catheters be more convenient for all cases, yet I would use an English one to practise the operation with the instrument of Frère Côme, or with the knife of Mr. Blizard, because in both cases the staff being withdrawn at the moment either instrument begins to act, the direction of the incision into the neck of the bladder and prostate is in no respect guided by the form of the staff. It depends on the operator to make the incision more or less oblique, and more or less extensive; but if, on the contrary, we use an instrument which acts from *without inwards*,

at the same time the staff enters the bladder, it is inevitable that the direction of the incision into the neck of the bladder and prostate must be determined by that of the beak of the catheter. If, the catheter being held in a vertical direction, the beak is inclined with respect to the axis of the body, the incision must be so too. The inferior edge of the triangle or kind of trapezium, which is represented by the whole of the wound, will not be sufficiently horizontal or parallel to the axis of the body; still less if the outer incision be commenced much in advance of the anus, unless the incision be prolonged as far as possible between the anus and tuberosity of the ischium. This is precisely what took place in the two operations by Mr. Cooper, and which is practised, I am told, by almost all the English surgeons.

Who does does not see that this manner of practising either the outer incision or that of the neck of the bladder, is defective on the following grounds. In the operation even, it is necessary (for the purpose of seizing the stone) to hold the handles of the forceps very high, for the extraction must present more difficulties when the instrument is held horizontally; and after the operation, should there remain any fragments of the stone broken off in the bladder, the wound is not favourable to the exit of these foreign bodies.

But it appears certain, that the English surgeons

have not so often as we have, to remedy hæmorrhage after lithotomy. This advantage arises from their mode of making the incision. It is just possible, that in beginning the first incision very much in advance of the anus, and not prolonging it much towards the tuberosity of the ischium, and not using quite horizontally the instrument destined to divide the neck of the bladder, and prostate, one may avoid the perineal artery. This artery is the sole immediate source of the hæmorhage, which may take place during the operation. The trunk of the artery from which it proceeds (the internal pudic) is quite inaccessible in the operation; and unless it deviate from its natural course, I know not how one could reach it. The inconvenience to which one is exposed, in "laterizing" too much either the superficial or the deep incision in the lateral operation, is not that of opening the pudic artery itself, but of dividing the perineal artery nearer its origin, and where, consequently, it can furnish a larger quantity of blood.

There exists at London, an establishment supported by voluntary contributions, of which the principal, if not the sole object, is, to distribute gratuitously trusses to such of the indigent as are afflicted with rupture. I will not say of this establishment, as I have said of the infirmaries established in London, and other towns of England, for the treatment of diseases of the eyes, that they are

more prejudicial than useful to the individuals for whom they are destined. But, considering it with respect to the improvement of the art, and the advantages which surgery may derive from it, it is of no utility whatsoever. The opportuity of seeing a great number of individuals afflicted with hernia, reducible or irreducible without strangulation, can determine nothing but the frequency of the different species of the disease: it is the sole thing which the surgeon can do, who has the care of this establishment (Mr. Blair). Besides which, it can only establish the frequency of the different kinds of hernia relative to their seat, and not relative to the parts which form them.

It is much more important to know the interior structure of each, that is to say, the nature of the parts displaced, and the connexion of these parts either with each other, or with the adjoining parts; all the varieties of strangulation; all the various difficulties which may occur in the operation; and all the anomalies of which the operation is susceptible. Such are the principal points on which the attention of observers and practitioners has been, and ought still to be fixed.

It has been by anatomical researches on the structure of the different parts of the abdomen where hernia may form, by the dissection of hernias on the dead body, by observations made on those who are suffering under symptoms of strangu-

lation, and, above all, by observations made on those who have submitted to the operation, that the history of hernia has been successively extended, and it is from the same sources that we can expect to procure fresh light; but so many facts have already been collected on every thing connected with hernia, that we can only glean after those who have preceded us in this vast field. How few things truly new and useful have been added to what we already knew by the labours of some modern authors!

In the number of these labours, important, nevertheless, in themselves, we must reckon those of some English surgeons, and especially the work of Mr. Astley Cooper, and the didactic treatise of Mr. Lawrence. I have already spoken of the merit of this latter work, which, without containing many things absolutely original, presents a methodical and complete account of all that is yet known on the subject of hernia; and by which we may see that our neighbours and rivals are not more advanced than we are in this part of surgery. I have already expressed, and I renew here, my wish to see the work of Mr. Lawrence translated into our language, and placed within the reach of our students.

Like Scarpa, Mr. Cooper has wished to clear up some points in the history of hernia; like Scarpa, he has particularly fixed his attention on what we

may call the anatomy and pathologic anatomy of hernia, especially the most common, as the inguinal crural and umbilical, and, as might naturally happen, Mr. Cooper more than once touched the same ground. Directing their researches towards the same end, they have, on many points, come to the same results. There are also some things peculiar to each of these gentlemen. The most interesting thing added by Mr. Cooper is, a description of the crural arch, more accurate than had hitherto been given; and also the indication of a remarkable variety of inguinal congenital hernia in male subjects, or rather, a sort of hernia which has both the character of a common inguinal, and of a congenital hernia.

At whatever period of life the testicle comes through the ring, and arrives from the abdomen into the scrotum, drawing with it a portion of peritoneum, which forms the tunica vaginalis, the communication between this last-mentioned membrane and the abdominal cavity begins to be interrupted at the ring even: it is there which commences the obliteration of a part of the tunica vaginalis testis. Whether afterwards this obliteration proceed successively from above downwards in its greatest extent, or whether, as is more probable, this obliteration taking place at the ring, the tunica vaginalis extends and detaches itself completely from the peritoneum. Whichever it be, if the viscera of the

belly protude through the ring immediately after the testicle has descended, or when it has been but a short time in the scrotum, then the communication between the tunica vaginalis and abdomen is not interrupted, there is no peculiar herniary sac, the displaced parts are in the cavity of the tunica vaginalis, and in immediate contact with the testicle. This is what constitutes the species of hernia named Congenital.

But if a powerful cause of hernia act while the tunica vaginalis be only obliterated at the ring, and when it is still continued to the peritoneum, although these two cavities no longer communicate, it may happen that a portion of abdominal peritoneum is displaced to form a herniary sac, and that with the parts which it contains, it insinuates itself into the tunica vaginalis, which adheres to the ring. In this case, there exists a double herniary sac, or two sacs, one within the other, the exterior formed by the tunica vaginalis, and the other (like the sac in all other sorts of hernia) a simple accidental prolongation of the peritoneum. The interior one only communicates with the abdomen, and the two together represent a bag, folded within itself, with the testicle prominent against it. Such is the species of inguinal hernia, which Mr. Cooper describes, and says he has observed, at the same time confessing that he has only confirmed an observation of Mr. Hey. A case of this sort of hernia is, indeed,

warranted in Hey's Practical Observations in Surgery.

Profiting by the first researches of Gimbernat, a surgeon at Cadiz, Mr. Cooper has described, with perfect accuracy, the aponeuroses of the crural arch, those of the inguinal region, and every thing connected with the anatomy of crural hernia. In advance of that notch which separates the anterior and superior spinous process of the ilium and the spine of the pubis (or which these two eminences bound) passes that bundle of muscles, the grand psoas and iliac, the crural artery, vein, and nerve, and several nervous fibres. The common mass of the psoas and iliac muscles covers the space comprised between the inferior spinous process of the ilium, and the eminence called ilio-pectineal. The crural artery, the crural vein (always within the artery), and the crural nerve (always on the outer side), are within that eminence, and applied on the most external part of a triangular space belonging to the horizontal branch of the pubis. The internal part of this space is free as far as the spine of the pubis, into which is inserted the inner extremity of the ligament, called Poupart's, or Fallopian.

Bearing in mind this arrangement of parts, the following will be the position of the crural arch, Poupart's ligament, that fibrous band fixed at one end to the anterior and superior spinous process of the ilium, and at the other end to the pubis, tying

together the aponeurosis of the external oblique, and the crural aponeurosis, is not merely applied over the parts which pass in front of the hollow of the pelvis, and on the inner part of the horizonal branch of the pubis, it is not simply united to these parts by the cellular membrane. In its external half, it adheres very strongly to the psoas and iliac muscles, or rather, it is closely united to an aponeurosis, which covers the large flattened portion of the iliac muscle. On this aponeurosis, are applied the external iliac vessels before the escape from the crural ring. This close connexion between the ligament and aponeurosis, prevents any communication from the abdomen outwards, in this part of the crural arch. On the other side, external to the spine of the pubis, and for about three quarters of an inch, or an inch, the Fallopian ligament, is fixed to the posterior edge of the horizontal branch of the os pubis, which edge forms part of the upper cavity of the pelvis, by a thick triangular aponeurosis; the base (a little notched) of this triangle is turned outwards; the summit is confounded at the spine of the pubis with the internal extremity of the Fallopian ligament. This aponeurosis, which the English surgeons call Gimbernat's ligament, closely shuts the crural arch withinside, and opposes the escape of the viscera towards this part. But, between the base of the triangle formed by that ligament, and the adherence of the Fallopian ligament

to the aponeurosis of the iliac muscle, there exists a free space for the passage of the crural vessels and nerves. It is here alone that the ligament of Fallopius is only contiguous on its posterior surface to the parts which it covers. The space I speak of, limited without, within, and in front, by aponeurosis, is also limited behind by that part of the horizontal branch of the pubis, next to the ilio-pectineal eminence. It forms an opening rather oval transversally, and rather longer in the female than in the male subject, and which one may call the crural ring, through which pass the viscera in crural or femoral hernia.

We enlarge necessarily the crural ring, and relax very much Fallopius's ligament, in cutting the ligament of Gimbernat parallel to the branch of the pubis; and from the base towards the summit of the triangle which this ligament represents, without even touching the ligament of Fallopius. Gimbernat proposed this mode of disengaging the hernia in the operation, at the same time that he described the ligament which bears his name. It is more advantageous in the male than female subject. In keeping close to the body of the pubis, as far as its spinous process, we are sure to avoid the spermatic artery; which, on the contrary, we run some risk of doing in dividing the Fallopian ligament towards its middle part, and perpendicularly to the line

which it describes. I have already succeeded extremely well several times, in practising the operation for crural hernia by Gimbernat's plan. I have only performed it on women, but it ought to be equally successful on men; and this manner of freeing the crural ring may be so much the more generally useful, as in the great majority of cases, femoral hernia is of very small size even when there is strangulation.

Several aponeuroses, distinct from each other, occupy the inguinal space, and without an exact knowledge of them, we cannot have a just idea of femoral hernia. The first then, and immediately below the skin, confounded below with the subcutaneous cellular tissue of the thigh, and above with that of the abdomen, covers all the inguinal space, Poupart's ligament, and a considerable extent of the aponeurosis of the external oblique muscle.

Under this superficial aponeurosis lies the fascia lata, or crural aponeurosis, fixed to the crural arch by two portions separated from each other, as far as a little below the opening of the saphena into the crural vein. One of these portions occupies rather more than the external half of the inguinal space; it is thicker and more superficial than the other. It is strongly attached to Fallopius's ligament, and appears to be merely a continuation of the aponeurosis of the great oblique muscle. It is termi-

nated by a concave, of which the superior extremity, under the form of a little falx, is extended along the inner part of the ligament of Poupart. This falx never extends to the spine of the pubis. Its free edge is smooth and rounded, as if the aponeurosis to which it belongs were folded under the Fallopian ligament. The second portion arises from the horizontal branch of the pubis, and is continued behind the femoral vessels and nerves along with the aponeurosis of the iliac muscle. It covers the pectineus and first adductor; it is afterwards continued with the first portion, which has just been described. The saphena vein conceals the point of union of the two portions, which thus occupying the outer and inner parts of the inguinal space, are one a little in advance of the other at the middle of this space, the external portion being rather more forward than the other. The interval which separates them, forms immediately below the ligament of Fallopius a sort of oval opening from above downwards, which is limited by the concave edge of the external aponeurosis, and which after we have removed the cellular tissue and lymphatic glands which fill it, enable one to see a part of the crural vein. It is at the lowest point of this oval aperture, that the crural vein receives the saphena.

In femoral hernia, the parts displaced, after having escaped through the crural ring, or after

having passed under Poupart's ligament, must be engaged in this oval space, and clear that which we may call the opening of the saphena vein. The tumour must be immediately under the superficial aponeurosis, and only separated from the integuments by that aponeurosis.

For a long time, in practising the operation for strangulated crural hernia, I had been struck with the slight degree of thickness between the integuments and the herniary sac, and that in thin subjects it required some care not to open the sac in the attempt to lay it bare; but I never suspected that the connexions of femoral hernia were such as I have described. What at first I did not imagine, but what the careful dissection of the crural arch, and the aponeurosis of the inguinal space, had induced me to suspect, but which I have never been able to confirm by the dissection of crural hernia on the dead body, has been already taken notice of by one of our most distinguished anatomists and young surgeons. M. Béclard has ascertained several times on the dead body, that in crural hernia the tumor is embraced by the opening of the saphena vein, and that consequently the saphena is always behind the herniary sac, which could not possibly be the case, if, as is generally supposed, the displaced parts remain behind the fascia lata.

There are two principal kinds of amputation performed on the members; one in the continuity,

the other in the articulation. Two methods have been agreed on for the first kind; circular amputation, and amputation by a flap. Two methods also are equally adopted, or rather are equally admissible of treating the wound afterwards; either union by the first intention, or dressing the wound in such a manner that suppuration shall be established, and that it shall only be cured by the slow process of granulation.

To what point is immediate union advantageous after any amputation, and particularly circular amputation in the continuity of a limb? What is the real utility of the flap operation in these cases? What articular operations ought to be preferred? We cannot sift these important questions to the bottom here, and I will merely say, that they are respectively the views and practice of the English surgeons. I will not dwell on the first, wishing to collect, in the same point of view, the different wounds for which immediate union is injudiciously employed by them, I have comprised in the number the wound which results from the amputation of the members.

The articular amputations which we have retained of all those which have been anciently either practised or simply imagined, are nearly the same as those in use in England. Like us, they absolutely reject the amputation of the foot at the ankle-joint, that at the knee, that at the elbow, and

the extirpation of the hand at the wrist; at least they are not described in modern English works, and are not even mentioned in the operative surgery of Mr. Charles Bell.

This author describes the amputation of a part of the foot, but he does it in a few lines only, and in such a manner, that it is impossible to ascertain if, by partial amputation of the foot, he understands the operation which may be practised in the continuity of the tarsus, or of the metatarsus; or whether he means the separation of all the toes at their articulations with the metatarsus; or of this last at the junction with the tarsus, and consequently the removal of all the anterior half of the foot nearly; or, lastly, the operation of Chopart, at the double articulation of the scaphoides with the astragalus, and cuboides with the os calcis.

Drawing from other sources, I obtain more exact knowledge of the partial amputations of the foot practised by the English surgeons. I am certain that the principal of them do not even know the operation of Chopart. One of them, whom I most visited during my stay in London, begged me to shew it to him on the dead body, but I know not what accident prevented it. They have performed in England the partial amputation of the foot, at the articulation of the tarsus and metatarsus. Mr. Hey has practised it twice, and the two cases are related in his valuable collection of observations.

The first was performed in an irregular manner, almost feeling his way. His narration of it is not precise, and it is difficult to get a clear idea of the operation from it.

The details of the second shew that it was practised as methodically as possible. To render the surface more equal for the application of the flap from the sole of the foot, Mr. Hey took off with a saw that portion of the first cuneiform bone which projects when the tarsus is separated from the metatarsus.

The necessity of making a flap, or perhaps two, in articular amputations, is generally agreed on. The circular division of the soft parts is not adapted to this case; for amputation in the continuity of a limb, if it were necessary to make an exclusive choice between the two, it would certainly be in favour of the latter, which is indeed most generally practised; but the flap operation is nevertheless preferable in some cases, especially when it is advisable to heal the wound immediately; more than this, as I have mentioned in another part of the work, if we prefer union by the first intention, we must also prefer the flap operation.

The English surgeons have furnished me with proof of this; they are outrageous partisans for immediate union. I have seen, in going over the London hospitals, a greater number of individuals, who had been subjected to the flap operation, than

one should find in the hospitals of Paris. They even shewed me, at the Middlesex hospital, a man whose leg had been amputated with a single flap made of all the flesh of the calf, exactly as it used to be performed at the period when this operation was first imagined. This case, however, would not tell in favour of the method; for it was now three months since the operation, and his leg was not yet healed. Amongst us, it is the military surgeons who have least objected to the immediate union after amputation, and it is amongst them that the flap operation finds most partisans. Myself, a partisan certainly, but a moderate one, of immediate union of the wound after amputation of the limbs, without however abusing it, I practise also the flap operation more than other surgeons. In consequence of these ideas, I have recently adopted the plan of making a *double flap* in amputating the leg, which is by far more convenient, if we intend speedy union. I practise also the flap operation for the thigh, the arm, and fore-arm. With respect to that of the leg I have no other merit than having put in execution a thing long projected. Ledran, in his Treatise on Operations, describes that by two flaps, and thus extends to the leg the method proposed by Ravaton and Vermale for the amputation of the thigh; but Ledran only speaks of attempts on the dead body, and I know not if, since his time, the operation has been practised by other surgeons.

Give me leave, after a few preliminary reflections, to mention some facts which I possess relative to this operation.

To reproduce the plan of applying the whole calf of the leg in one flap, transversely over the end of the stump, would be retrograding the art. It is only by forming two flaps of the same form, length, and thickness, that this operation can be advantageously substituted for the circular one, but there are some difficulties in the execution, and without doubt that is the reason it has not been adopted hitherto; the principal source of these difficulties is the unequal distribution of the soft parts, and still more the unequal size of the two bones of the leg. In these respects, there is a great distinction between this and the operation on the fore-arm, where the bones are nearly the same size, especially in the middle; and it is easy to form the flaps, by passing a long narrow knife from one side to the other, and cutting up close on the bones; but in the leg, where the muscles are so much in front, it is exceedingly difficult to form two flaps with round edges, and of the same form and dimensions. One can only accomplish it in tracing each of them by a demi-oval incision, which, from the surface, shall penetrate obliquely into the thickness of the flesh down to the bones. It is thus that I perform it:—The two incisions unite at two acute angles, one on the shin, and the other in the middle

of the calf, and both of them in the horizontal direction in which we propose the section of the bones. The two flaps being traced in this manner, I detach them from above downwards, cutting as close as possible to the surface of the bone; after which there only remains to divide the interosseous substance, and saw the bones perpendicularly to their axis, as in circular amputations.

Nevertheless, the last time I performed this operation, I succeeded in making the inner flap much in the way it is made in the thigh, that is to say, I passed a narrow long knife, a little within the edge of the tibia, through to the middle of the calf, and made it follow the internal edge of the bone in the direction of the base of the flap: only to avoid the ragged cut, which the knife might make in the skin, I made another incision about two inches long, within the spine of the tibia, and beginning from the point where I intended to make the section of the bones. The retraction of the two edges of this wound gave me room to turn the knife more easily along the face and inner edge of the tibia. The instrument having traversed the calf, the flap was presently completed. Perhaps I might have spared the patient some moments of suffering, had I began by the outer flap instead of the inner, and might then have avoided this first incision on the edge of the tibia. I propose to put this to the test the first opportunity.

But in whatever manner we proceed, the flap operation of the leg is more tedious than that of the thigh, arm, or fore-arm; it requires nearly the same length of time as the circular amputation, so that, in this respect, it possesses no advantage: but when we wish for immediate union it is evidently preferable, as we thus put in contact, not only the skin but the two flaps, formed of all the soft parts of the leg, and which can touch in all the points of their bleeding surface. A small part of the extremity of the tibia is only covered by the skin, a thing which it is impossible to avoid, but every where else it is the flesh itself which is in contact with the surface resulting from the section of the tibia and fibula. Consequently, the organic adhesion must be established more promptly amongst all parts of the stump, and this adhesion must be preceded by less suppuration than when the skin alone is in contact with the extremities of the two bones. After the cure there remains only a line of cicatrix, as superficial as possible, or very slightly depressed, and the mass of flesh forms an ample pad for the end of the stump.

I have four times performed this operation, each time for a white swelling of the foot, which rendered amputation indispensable. It is the most common disease in our civil hospitals, and in private practice, for which we use amputation of the limb. The four patients, of whom I have spoken, were

each in a state of great exhaustion, and especially in all the cases the leg was excessively lean. All the four have survived the operation.

I made the first essay on this double flap operation on the leg, in the month of February last, on a girl twenty-six years of age, who had been several months at La Charité. I used all the precautions above described. The flaps were held together by means of adhesive plaster; the ligatures, which had been laid at the posterior angle of the wound, came away altogether the ninth day after the operation; on the thirty-second day, the suppuration had entirely ceased, only a line of solid cicatrix remained. Perhaps she would have been still sooner cured, had there not come on, about the twelfth day of the operation, without any apparent cause, as light inflammatory swelling of the stump, which became œdematous, and for which I was obliged to use a compressing bandage for some time, renewed every day.

A few days after this stump was healed, I had occasion to practise the same operation on M. G. formerly an inspecting field officer, a man well known in the army, who, in the Russian campaign, after some wandering rheumatic pains, had a white swelling in the articulation of the right foot; the tumor was already considerably advanced when he arrived at Paris. For two or three months I saw him frequently in consultation with Dr. Burdin,

who visited him daily. Every thing was tried to arrest the progress of the disease, but in spite of our endeavours, it made a most rapid advance. The increasing pain, and the wasting of the patient at last rendered amputation urgent. His great strength of mind enabled him to submit to it with calmness, and he even wished me to perform it early the following morning, after our first mentioning its necessity. I wished, in this instance, to guard against profuse suppuration, and endeavoured to accomplish a speedy cure. My wish has been fulfilled. On the thirtieth day, the union was complete. From the time the ligatures came away, there oozed but a very small quantity of pus from the lower angle of the wound; this soon ceased, and there remained at this part only a very small superficial wound, which cicatrized rapidly. Nevertheless, on the second day after the operation, the patient had suffered severe pains in the stump; these ceased immediately on relaxing the bandages, and especially one which was applied round the limb (lightly compressing it) before putting on the adhesive straps. It was rather extraordinary that I should apply such a bandage, as it is never my custom under any circumstances, and I have even blamed such practice in others; but in the present case, after the amputation was finished, and the vessels tied, I thought I observed that the outer flap was rather too short, and there wanted a little

more integument to adapt it well to the other flap: this was my reason for applying the bandage. It was a mistake; for, after I had taken it away, I found the edges of the flaps in the most perfect contact. It was this bandage which, becoming tight by the swelling of the stump, had caused the pains spoken of.

It was about the same period (that is, in the fifth week) after the operation, that the two other patients were cured, on which I had performed the same operation, which is much less time than nature requires to cicatrize the wound, which results from circular amputation of the leg. I reckoned, however, but little on the probability of success with one of these patients, who, having a white swelling at the articulation of the foot, and a caries of the tarsus and lower part of the tibia and fibula, was in the last stage of marasmus. I hesitated some time in proposing the operation, and he, after what I had said to him on the subject, did not immediately submit to it. He had been three weeks in the hospital, when I operated on him the 26th of April of the present year. Some peculiar circumstances took place afterwards, owing to the extreme weakness of the patient. He did not suffer at all during the first few days after the operation, yet when we removed the first dressings, there was a kind of phlogosis of the skin all over the stump, and even above the knee, and several small

sores had formed by the abrasion of the cuticle, especially where the skin had been compressed by the folds of the bandage, although it was applied very lightly. These sores became afterwards true sloughs, not of great extent, but comprising all the thickness of the skin. The stump was consolidated before the wounds produced by these sloughs, were thoroughly healed. For several days after the ligatures came away, one of which remained sixteen days, there oozed from the lower angle of the wound a considerable quantity of reddish pus, evidently mixed with blood, and even some pure blood, but decomposed. I succeeded sooner than I expected in drying up this, by permanent compression on that part of the side of the stump. It is hardly necessary to say, that from the moment the man was out of danger, from the immediate consequences of the operation, his health improved from day to day.

The last of the four patients I operated in the month of July last; he was sixteen years of age, a relation of Dr. Merat. The white swelling of the articulation of the foot had been developed about eight months, in consequence of a sprain, without doubt it would not have been produced from this cause, or have made such rapid progress, if he had not been of a very feeble delicate constitution with scrophulous diathesis. It was on him that I succeeded in forming the inner flap by passing a

straight knife through the leg, and taking only one sweep through the flesh which was to compose the flap. I had previously made an incision in the skin along the inner edge of the tibia. After the separation of the limb, I had some difficulty in tying the anterior tibial artery, and I placed on it successively three ligatures. Three others were applied on different arteries, and the six ligatures (of which I cut one end of each close to the artery) were all collected and laid at the posterior angle of the wound. Afterwards I united the whole extent of the two flaps with adhesive straps, except at the posterior angle. There was no consecutive hæmorrhage; but on the second day after the operation, the patient complained of great pain, and I took off the bandages, without however touching the adhesive straps. There was some redness of the skin as high as the knee. The bandage, which had not been tight, was re-applied still more loosely, and the stump was fomented with emollient fomentations. In twenty-four hours the pain and inflammation were gone. I was able to take away one ligature on the eighth day, but the last did not separate till the fifteenth day. From this time the quantity of pus from the posterior angle diminished daily, and also that from the anterior, where a slight suppuration had taken place. On the twenty-fifth day, the little patient could walk with crutches, but two very small wounds at the two angles of the flaps, and another along the interval between the

two flaps, where there existed only a line of cicatrix, were not completely healed till the thirty-sixth day.

Here I conclude a work, which has a different character from that which I first intended. What was to have been only a plain account of the observations I made on the London Hospitals, and on the mode of teaching and of practising surgery in England, has gradually changed almost without my being aware, or wishing it, into some rather extended disquisitions on the principal points of surgery. It contains many practical facts. I have not, for a moment, lost sight of my essential object, however widely I may have wandered, that of rendering more complete the parallel between English and French surgery. I have endeavoured to exert the most rigid impartiality. Shaking off all prejudice and national pride, I have used the same frankness in speaking of the really fine and useful things in English surgery, as I have in shewing its defects. If I must conclude by a summary opinion, I would say, that with respect to the art of surgery, as with respect to its habits and institutions; in whatever light we consider it, England is the place for contrasts. By the side of the most brilliant features, English surgery exhibits glaring imperfections—French surgery is more *generally good.*

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